

**DIVERSITY OF MALE IDENTITIES
IN EARLY AND MIDDLE LA TÈNE PERIOD
CEMETERIES IN CENTRAL EUROPE**

Peter C. Ramsel

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With contributions from
Friederike Novotny, Vienna (Anthropology),
and
Joscha Gretzinger – Stephan Schiffels, Jena (DNA)

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CONTENTS

Preface	7
The story of the project	7
Acknowledgements	8
The aims of the project	8
Definition: Middle, Central Europe – MEC/CEC	9
The concept of identity	10
Identity in archaeology	11
Definition	11
Different kinds of identities	11
Scientific/philosophic bases of identity	14
Evidence from funerary material culture	14
Masculinity in research	15
Male identities (?) – state of research, theory	15
The Organization of Iron Age Societies	18
Smallest unit: the household/familia	18
Sub-ethnic groups, tribes	19
Burial rites	21
Inhumation	21
Orientation	21
Position of the body	21
Number of burials in a grave	21
Secondary burials	22
Cremations	22
La Tène A	23
La Tène B1	23
La Tène B2 to the beginning of La Tène C	23
Biritual graves	24
Slovakia	24
Research history and state of research	24
Cemeteries	25
Bajč	25
Bučany	26
Chotín	26
Dubník	27
Hurbanovo-Bacherov Majer	27
Kamenín	28
Malé Kosihy	28
Maňa	28
Palárikovo I	30
Palárikovo II	30
Svätý Peter	30
Trnovec nad Váhom – Horný Jatov	31
Special cases	31
Austria	71
Research history	71
State of research	72
Cemeteries	73
Au am Leithaberge, site Kleine Hutweide	73
Au am Leithaberge, site Mühlbachäcker	73
Franzhausen	74
Gemeinlebarn	74
Getzersdorf	74
Göttlesbrunn	74
Herzogenburg	75
Inzersdorf	75

Kuffern	75
Leopoldau	76
Mannersdorf am Leithagebirge I	76
Mannersdorf am Leithagebirge II	76
Oberndorf	77
Ossarn	77
Petronell-Carnuntum	78
Pottenbrunn	78
Rassing	79
Walpersdorf	80
Special cases	117
Moravia	120
Research history and state of research	120
Cemeteries	120
Blučina 3	120
Brno-Chrlice	121
Bohunice	121
Brno-Maloměřice	121
Holubice	122
Horní Heršpice	122
Hoštice	123
Křenovice	123
Lovčičky	123
Marefy	123
Nížkovice	124
Ponětovice	125
Pustiměřské Prusy	125
Šlapanice	125
Special cases	158
Discussion and Conclusion	159
Different classes of male identities	159
Age classes	159
Boys – Boys?	159
Adults – armed and non(dis)armed	160
Panoply groups	160
Archers	160
Old men – a time without weapons	161
Cross-gender examples	163
Armed women, fighting women (?)	167
Craftsmen identities	169
Conclusion	170
Diversity of Male Identities in Early and Middle La Tène Period Cemeteries in Central Europe	
Summary	171
Vielfalt von männlichen Identitäten auf früh- und mittellatènezeitlichen Gräberfeldern in Zentraleuropa	
Zusammenfassung	173
Diverzita mužských identít na pohrebiskách včasnej až strednej doby laténskej v strednej Európe	
Súhrn	175
Férfi identitások sokfélesége kora és középső La Tène korszak temetőiben Közép-Európában	
Összefoglalás	177
Literature	179
Friederike Novotny	
Skeletal indicators of health in La Tène Period populations from Walpersdorf and Franzhausen Mitte	
(Traisen valley, Lower Austria)	193
Joscha Gretzinger – Stephan Schiffels	
Report on Genetic Analyses of Iron Age Samples from Slovakia	215

PREFACE

The story of the project

It all started in May 2015 when I found myself again looking around for chances to land a project in Austria and the surrounding areas. At the traditional Iron Age Keltové/Kelti meeting in beautiful Zvíkov, Bohemia, some colleagues gave me a tip about the new programme called SASPRO in Slovakia. SASPRO (Slovak Academy of Sciences Programme) is the mobility programme of the Slovak Academy of Sciences, and is financed by the Slovak Academy along with Marie Curie Actions and the FP 7 of the European Commission. SASPRO is divided into the incoming scheme, for attracting outside scientists to Slovakia – and the reintegration scheme, for attracting Slovak scientists back home in order to counteract the brain drain.

The topic of the SASPRO project I applied for concerned male identities in La Tène cemeteries in our region. And it was accepted. Ultimately, my SASPRO project lasted from the beginning of 2016 to the end of 2018 – so, 3 years.

The process whereby I obtained my SASPRO project involved at least two reviewers and included an interview in Bratislava conducted by an international commission. I was working at excavations in the Tyrols when the call reached me to come for the interview in the capital of Slovakia. It was November 2015. I soon travelled to Bratislava to visit the headquarters of the Slovak Academy of Sciences, and I successfully passed the presentation and the interview. At the end of the month, the results of the committee were published and I was among the lucky people awarded one of the funded projects. In December, once back in eastern Austria (at an excavation in Neusiedl an der Zaya), I started to negotiate with the Institute for Archaeology to conclude the contract in time. We got bogged down in the Slovak-Austrian bureaucracy, but managed to successfully battle through it and start the project. Though I knew Nitra from earlier visits and lectures, it was nevertheless very interesting to explore both the old and new parts of the town and enjoy the diverse characteristics and architecture of my new working home. With the help of many colleagues from the Institute, I learned how to work and live in Nitra – without knowing more than just a bit of the language.

In September 2016, Katharina Rebay-Salisbury (ERC Starting Grant “The value of mothers to society”) of the OREA Institute in Vienna and I organized the first workshop: “Multiple femininities – multiple masculinities: the diversity of gendered identities in the Bronze and Iron Ages”, held in Klement/Oberleiserberg in Lower Austria (FWF-Projekt P 26820 partly funded the workshop). About 30 colleagues from six nations (Czechia, Austria, Germany, Croatia, Hungary, and France) joined our call. It was a very productive meeting with fruitful discussions, one I would call a big success for both host institutions.

Besides the evaluation interviews, every year we held a SASPRO seminar in Bratislava to present the results and the development of our projects. The SASPRO programme also was lending support to our future careers, so we had the possibility to take part in soft skill training workshops – for instance, on writing proposals, making presentations, and honing our rhetorical prowess. These meetings were very intensive, but also very useful – and they helped the small community of SASPRO members grow together.

In 2017 I was invited by the Max Planck Institute for the Science of Human History to the project “Celtic Population History” and joined the commencement conference as the representative of Austria and Slovakia.

At the end of October 2018, B. Kovár and I organized at the Archaeological Institute in Nitra the final SASPRO workshop: “Diversity of Identities in Prehistory, Early History, and the Present”. Thirteen papers from 17 authors were among the positive results of this conference. About 30 contributors from nine countries were present at the conference and for the final excursion to the castle in Nitra. The results of these two workshops will be published in Nitra (*Bistáková/Březinová/Ramszl 2020*).

Over the three years of my SASPRO project, I was able to publish one book, 14 papers in magazines/conference volumes/the internet, and made 18 presentations at the 19 conferences I attended. Besides this, my staff and I managed to organize two conferences, I supervised eight students (so far, five successfully), and lectured at the universities of Vienna, Innsbruck, Oloumuc, Brno, and Nitra. I also submitted three projects and was included in a further three. Three books and 14 papers are already in preparation, in print, or submitted.

Acknowledgements

I wish to thank the director of the Institute, Matej Ruttkay, my scientist in charge, Karol Pieta, and above all Gerta Březinová for their important support in the starting phase of the project. Nor can I neglect to thank my science officers at the SASPRO-center, Zuzana Hrabovská-Palíková and Eva Krištofová, who always had an open ear for my questions and willingly solved every problem I had. The same goes for Anna Šupová, head of the Economics Department at the Institute in Nitra. I am also grateful to my colleagues and friends Lucia Benediková, Jozef Ďuriš, Zora Bielichová, Mário Bielich, Vladimír Mitáš, and Zuzana Poláková – as well as Peter Milo, Branislav Kovár, Klaudia Daňová, Adrián Nemergut, Marek Vojteček, Michal Cheben, Alena Bistáková, Ivan Cheben, Susanne Stegman-Rajtár, Ján Rajtár, Jozef Zábojník, Kristian Elschek, Vladimír Varsik, Elena Blažová, Gabriela Holková (library), and Peter Červeň etc. who supported me in both my research and daily life in Nitra. Nor can I forget my SASPRO fellow in Nitra, Péter Prohászka. I was also very pleased to meet treasures among the already retired generation, like Václav Furmánek, Gabriel Fusek, Ondrej Ožďáni, and Jozef Vladár.

From the UKF – Univerzita Konštantína Filozofa in Nitra, I want to mention Jozef Bujna, Mária Hájnalová, Peter Romsauer, Dominik Repka, Noemi Beljak Pažinová, Zuzana Dudáková, and all the students. In Bratislava I acknowledge Radoslav Čambal, Igor Bazovský, Vladimír Turčan, Andrej Vrtel, Anna Gardelková-Vrtelová, and Jozef Bátora.

Additionally, there were also colleagues from the Slovak/Hungarian borderlands who supported me, like Marek Gere (Komárno), Gábor Tóth (Sopron), and Mónika Görföl (University of Szeged).

In Austria, I want to thank Christoph Blesl (Bundesdenkmalamt) for his support in getting published and unpublished data, as well as Maciej Karwowski for the data set of Göttlesbrunn, and Fritz Preinfalk for hints about Rassing. The data sets from Pottenbrunn, Mannersdorf, Oberndorf, and Ossarn had been created by several earlier projects of the Austrian Science Fund (FWF).

For guiding the book to publication, I want to thank very much Lucia Benediková for her excellent work!

The aims of the project

Discourse on male identities in the Iron Age has hitherto been dominated by thoughts about warrior identity. However, only a fraction of male bodies are laid out as warriors in their graves. This project will explore alternative male identities. What roles did men play in society? ‘Special identities’ that have emerged in the last years, i.e., ones with unclear affiliation (a male with a ‘female’ ring or costume, a female with weapons etc.) also suggest the idea of multiple male identities. This project shall analyze such cases against the backdrop of traditional models, applying methods from the field of gender analysis. One big advance we enjoy is the enormous corpus of La Tène period graves and cemeteries in the area of Slovakia, east Austria, and Moravia.

After decades of discussing ethnicity, the term ‘identity’ has become fundamental for archaeology. Identity can be located at the interface between the human being and society, providing a permanent process of becoming for the construction of social membership. Identity is the current state of an individual’s self-identification, and thus is never stable but permanently in a state of flux.

In this project I seek evidence of different subgroups within the large group of graves with anthropologically male skeletons (which doesn’t automatically mean that these individuals had been seen as ‘male’ in their own times).

What roles did men without weapons play in ‘warrior societies’? Is the status of unarmed men with finger rings made of precious metal the same – or different? First of all, different life-stage identities shall be analyzed – namely, ‘boy identity’, ‘adult identity’, ‘old man identity’, along with a very special and very fascinating case: ‘poor man identity’. Other ‘special identities’ can also be observed in La Tène period cemeteries. One such is that of ‘Druid identities’, like the one in Pottenbrunn, grave 520, Dürnberg, grave 321/322, etc., where remains of special medical-chirurgical instruments can be observed. We can also mention ‘craftsmen identities’, where distinctive tools permit us to identify professions.

Above all, past societies were by no means as simple as schoolbooks sometimes portray. Thus, the group of anthropologically male remains includes ‘special identities’ that cross the borders of standard

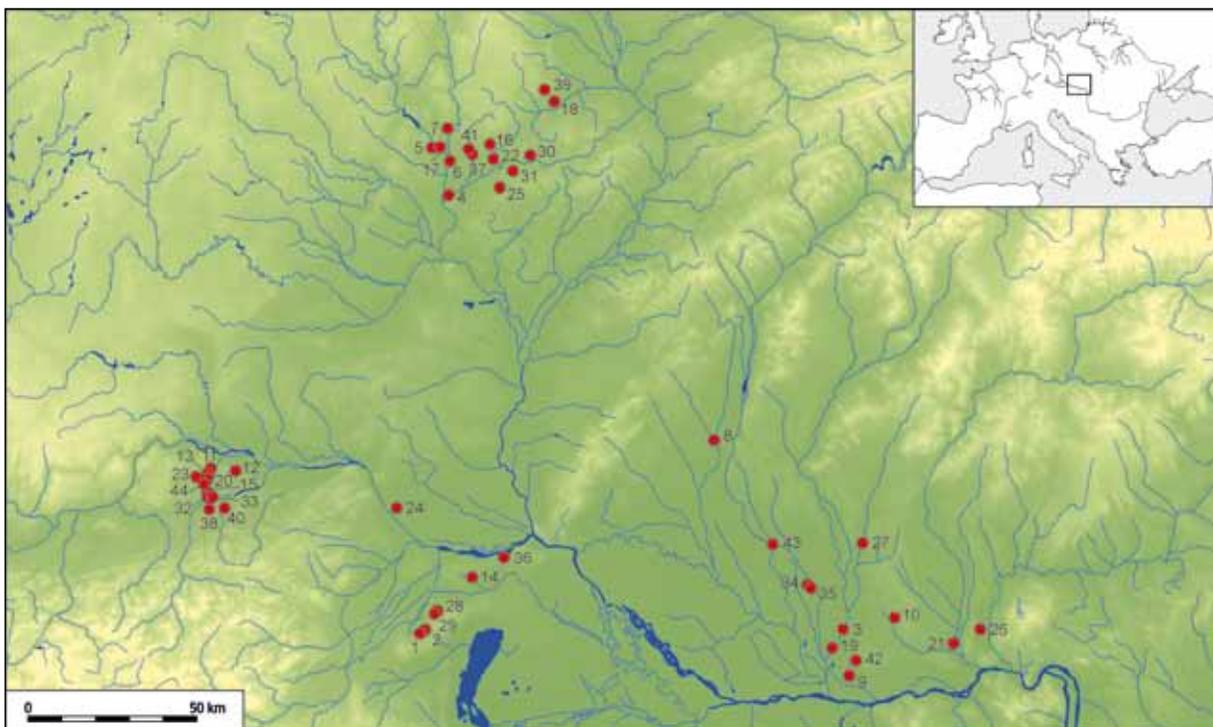


Fig. 1. Research area with selected La Tène cemeteries. 1 – Au/Leithaberge, KHW; 2 – Au/Leithaberge, MBÄ; 3 – Bajč; 4 – Blučina 3; 5 – Bohunice 2; 6 – Brno-Chrlice; 7 – Brno-Maloměřice; 8 – Bučany; 9 – Chotín; 10 – Dubník; 11 – Franzhausen; 12 – Gemeinlebarn; 13 – Getzersdorf; 14 – Göttlesbrunn; 15 – Herzogenburg; 16 – Holubice; 17 – Horní Heršpice; 18 – Hoštice; 19 – Hurbanovo-Bacherov Majer; 20 – Inzersdorf; 21 – Kamenín; 22 – Křenovice; 23 – Kuffern; 24 – Leopoldau; 25 – Lovčičky; 26 – Malé Kosihy; 27 – Maňa; 28 – Mannersdorf/Leithagebirge I; 29 – Mannersdorf/Leithagebirge II; 30 – Marefy; 31 – Nižkovice; 32 – Oberndorf in der Ebene; 33 – Ossarn; 34 – Palárikovo I; 35 – Palárikovo II; 36 – Petronell-Carnuntum; 37 – Ponětovice; 38 – Pottenbrunn; 39 – Pustiměřské Prusy; 40 – Rassing; 41 – Šlapanice; 42 – Sv. Peter; 43 – Trnovec nad Váhom – Horný Jatov; 44 – Walpersdorf.

or established models. Male skeletons with otherwise typical ‘female’ markers like special jewellery or ‘male’ markers that are used in a nonstandard way point to other models like simply male-female. Indeed, the field of gender archaeology has begun to exert a very important impact on our scientific research.

Definition: Middle, Central Europe – MEC/CEC

To explain why the title of the project and of this book includes the words ‘Central Europe’, I wish to start with definitions of the terms Middle/Central Europe as well as the Middle/Central European Corridor. As mentioned above, the particular research area was chosen because of the excellent and enormous corpus of archaeological sources and the close geographical proximity in this exceptional transition area between both east and west and north and south.

In archaeology and its kindred fields, the terms ‘Middle Europe’ and ‘Central Europe’ are very often used in our region. Most of the time, they are not defined in any way, but rather are left to the imagination of authors and their readers.

‘Middle Europe’ itself is a political-geographical term that depends on the point of view. In Austria and parts of northern Italy, it is typically used about the successor states of the Austrian-Hungarian monarchy, including areas that were influenced by it in a culturally relevant way, i.e., Bavaria and Frankia in southern Germany. Germans, in turn, tend to include themselves with Poland, Czechia, Slovakia, Hungary, Slovenia, and Switzerland (along with zones under their cultural influence, e.g., Südtirol, western Ukraine, and of course the Baltic countries). But “kulturräumliche Kriterien” are also often used to define this area. Before 1871, the term was important for the Austrian-Hungarian

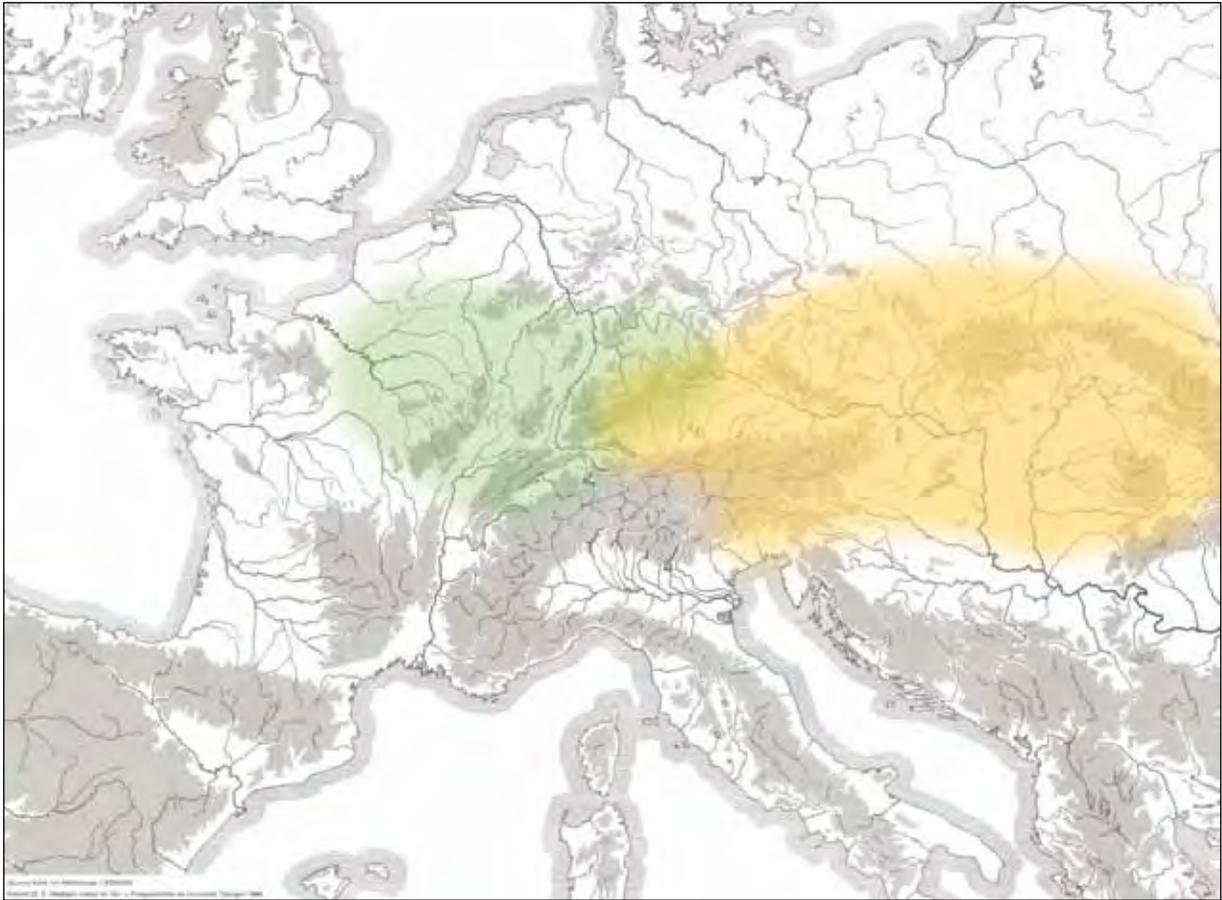


Fig. 2. The Central and Middle European corridors.

monarchy in order to propagate the 'Middle European Solution' intended to unite Germany and Austria-Hungary under the leadership of the Habsburgs. During World War I, the foundation of a Middle-European customs union was drafted by Theobald von Beltmann Hollweg (*Berglar 1987*) to pursue economic aims. Friedrich Naumann suggested in his book *Mitteleuropa* a union under the leadership of Germany (*Naumann 1915*). Thus we see that this term reflected a kind of tug-of-war between Austria and Germany.

My own usage – that of someone from eastern Austria – includes: Austria, Czechia, Slovakia, Hungary, southern Poland (western Galicia), western Ukraine (eastern Galicia), western Romania (Transylvania), northern Serbia (Vojvodina), Croatia, parts of northern Italy (Friaul, Südtirol, Trentino) and maybe parts of southern Germany (Bavaria, Franconia).

In my own definition, the 'Central European corridor' (CEC) in the *archaeological-geographical sense* is meant to be the area (mainly) north of the Alps from Transylvania to south Germany (see Fig. 2 – yellow; e.g., *Ramsl/Roncador 2019*), and the 'Middle European Corridor' (MEC) widens to the west to the Champagne Area (see Fig. 2 – green).

THE CONCEPT OF IDENTITY

It is hardly surprising to say that identity is "perhaps a problematic term... which may be understood in rather different ways, as static or dynamic, as objective or subjective, as social or individual, as factual or as constructed..." (*Pohl/Mehofer 2010, 10*).

Identity in archaeology

After decades of discussing ethnicity, the term 'identity' has become fundamental for archaeology. Following Donald Baxter in 2005, who noted that the exploration of past societies is an "archaeology of identities" (Baxter 2005), it was Niels Müller-Scheeßel who wrote in the first chapter of the volume *Soziale Gruppen – kulturelle Grenzen: ... scheint das Thema Identität ein Problem der modernen westlichen Industriegesellschaften zu sein..., ... der Verlust sozialer Bezugssysteme und die damit einhergehende Identitätsdiffusion...* [... identity is a problem of modern, Western, industrial society... because of... the loss of social reference systems and the dilution of identity...] (Burmeister/Müller-Scheeßel 2006, 10). Many others of my colleagues have dealt with this topic, including M. Díaz-Andreu, S. Lucy, St. Babić, and D. Edwards (Díaz-Andreu et al. 2005), and Manuel Fernández-Götz (e.g., Fernández-Götz 1994). It also bears mentioning that identity appears in different types.

Definition

Identity can be located at the interface between the human being and society, providing a permanent process of becoming for the construction of social membership. Identity is the current state of an individual's self-identification, and thus is never stable but permanently in a state of flux (Davidović 2006, 44). When analyzing identity categories (as Fernández-Götz 1994, 13 called it), a holistic point of view must be adhered to. And thus we observe gender, age, social status, ethnicity, profession, religion, and much more, applying the concept of intersectionality, so that the relationship between certain kinds of identities can help us to form an overview. Different kinds of identities cannot be seen as single phenomena, but as parts of a network.

Different kinds of identities

In our case, that of analyzing Iron Age cemeteries of eastern Austria, western Slovakia, and Moravia, we choose age, status, and gender as aspects of identity to obtain some remarkable results. The idea of ethnicity is not at issue in our case; rather, we use the term 'group identities'.

- Age
Age had always played a big role in human society. One can say that it determines the stages of life. Starting with birth and childhood, continuing with juvenility and adolescence, it proceeds to developed age, senility, and finally death. Every stage is dominated by certain biological and cultural determinants. Between childhood and juvenility often a kind of initiation happens, and for both boys and girls. But not all societies exhibit all of these stages; different societies have varying expectations about the behaviour of the given age group (Lucy 2005, 52). In the Iron Age – because of the lack of written information – we have no direct sources about the life stages of people. Only mortuary statistics can give us hints. For example, the youngest armed male individual (grave 230) at the La Tène cemetery in Mannersdorf (Lower Austria) died at the age of 14–17 years (Ramszl 2011). If we assume that the accompanying weapons were given at initiation rather than because of the status of the person's family, we will have a clear time corridor for when such initiation could have happened. Human societies have always conducted rich discussions on the matter of age. In ancient Greece, Mimneros and Solon had a discussion about age, asking if it is expiration or maturity (van Dyk 2015, 10). Biological age is to be set apart from chronological age, which denotes the physiological and mental capacities of the calendar age by years irrespective of the state of the organism. Yet people of the same chronological age may have different biological ages. Age and its stages are also a cultural construction.

In archaeology, one age was explored in a special way – namely, childhood. On the one hand, children were observed in the population statistics of cemeteries; on the other, they were associated with certain aspects of material culture like small sandals, shoes, and hats. The *topos* of carefree childhood is of course a construction of the bourgeoisie of 19th-century western culture. In fact children had to work from the earliest possible moment – and not only in the near past, but back in the Iron Age, too,

as shown by anthropological data from the Upper Austrian cemetery of the Hallstatt (Kern et al. 2009, 136–141; Pany 2005; Pany-Kucera/Reschreiter/Kern 2010).

There is a lot more information in ancient sources and epigraphy about different concepts of life-stages, but this is not the topic of the present work. To give some hints, I want to mention the study about *Mädchen* (girls) by K. Hofmann (Hoffmann 2014) and marriage in Roman times (Treggiari 1991). Age is, of course, the one identity that is expected to change over an individual's lifetime, and its role in the reproduction of social norms and material culture is a fundamental one that will be explored (Lucy 2005, 44).

- Gender

In recent years this aspect of identity seems to be the most compelling. Originating in feminist theory, it has spread throughout the social sciences, and is now appearing in normal social life. At first we have to define the difference between sex and gender. As M. Díaz-Andreu stated: *Sex refers to the physical and genetic elements of the body related to reproduction, including genitalia, chromosomal and hormonal distinctions and reproductive organs* (Díaz-Andreu 2005, 14; Voss/Schmidt 2000, 2). In contrast, gender can be seen as the 'social sex', which is defined and created by society, starting from the single person to a group. It is culturally based. But it bears mention that gender and sex/gender identities overlap each other and that this depends on the given situation. Within our western cultural (as dominated by Christianity and the 19th and 20th centuries' moral principles), and certainly within archaeology, only two sex or gender roles had been used or permitted. A final echo can be heard in the term 'archaeological sex', which is still used and discussed. But the times, they are a'changing and so it is more and more widely recognized that there are many examples of there being many more than two sexes and genders – that there is no limit to them inside a society.

The most popular example of this concerns the North American natives. From them we know the term *berdache*, describing biological males in female roles and also biological females in male roles (e.g., Forgey 1975). So on the one hand there are men in female clothes and costumes living a female life (including the performance of women's work and women's behaviour). But the essence of *berdache* did not lie in the change of costume, but 'rather in the publicly recognized, institutionalized change in role and status' (Forgey 1975, 2). The Navajo called them *nádleehí* (NAHD-lay), the Crow *boté* (bō-TAY), and the Teton Lakota *winkte* (wing-TAY). Often they marry other men, as described by John Tanner (1790–1847) concerning the Obijawa tribe (Tanner 1994; Taylor 2006, 83). This phenomenon was recognized also as something sacred, and *berdache* have often been a kind of medicine man or person "with power" (Forgey 1975, 5). But there were also big differences between North American natives in this regard, e.g., between the Plains inhabitants and the people from the Southwest.

On the other hand, women wearing male clothes and living a male life, including hunting and warrior duties, can be seen in paintings – mainly by George Catlin (1796–1872). In these cases, the girls avoided learning female tasks, they played with boys, and made with them arrows for hunting little animals (Blackwood 1984, 30). They performed the duties of the male gender role, including hunting, trapping, and fighting in battle. They also adhered to male ritual obligations. In the Southwest, cross-gender females did not bear children, their clan considered them nonreproductive (Blackwood 1984, 31). Most Plains tribes had warrior women who accompanied war parties in certain cases, and "were not a counterpart of the male berdache, nor were they considered crossgender" (Blackwood 1984, 37; Jacobs 1987). It is cited that there have been up to five or six *berdache* common among the tribes (Forgey 1975, 1). These kinds of gender roles had been observed by ethnologist in the 19th century. After defeating the tribal societies and their migration to 'reservations' administered under the influence of US (Christian) school policy, these phenomena were severely suppressed and thus disappeared. This also occurred under the influence of the dominant ideology of western culture, with its belief in the inferior nature of the female role and its insistence on heterosexuality (Blackwood 1984, 39, 40). In more recent literature, the term *berdache* has been replaced by 'two spirits' because of the discriminatory connotation of the first term (Jacobs/Thomas/Lang 1997).

Another well-known example of this is the *bacha posh* in today's Afghanistan and Pakistan, which refers to girls who are raised as boys, donning their clothes and behaviour. Those who lived their first teenager-years in this way, sometimes decide to live in a male identity for the rest of their lives. It is suspected that these traditions are pre-Islamic, from the time of the Sassanids (3rd–7th centuries AD; 'Persians'), and were connected with the religion of Zoroastrianism (Nordberg 2015, 288, 289). Similar phenomena have also been observed in Albania and Montenegro, where women live as men. Comparing the situation in Europe from the 15th to 19th century, it seems that the less a society is or-

ganized with border controls and medical examinations for soldiers, the easier it is for women to use male identities – e.g., Joan of Arc (Nordberg 2015, 254, 255). Such women also live in Pakistan, where they are called *alakaana* (in Pashtun language); in Urdu-speaking areas of Pakistan and India they are known as *mahi munda*. In Hindu tradition, there is the possibility of *sadhin*, with comparable circumstances existing in certain areas of Iraq and among the Kurds (Nordberg 2015, 283, 284). Indeed, the phenomenon of *bacha posh* is to be noted in many countries where women's rights are denied. It is not restricted to eastern or western, Islamic or non-Islamic areas.

An example from the Iron Age is known from the Scythians, where Hippocrates and Herodotus described male-to-female cross-dressing soothsayers, or magicians called *Enarees* (Taylor 2006, 84). Their gender-crossing counterparts are the well-known Amazons (Rolle 1989; Taylor 2006, 85).

Gender archaeology represents a change in the topic of archaeological analysis. It aims to explore the importance that gender has in social dynamics, the potential number of gender categories in the construction of the social the variations in gender relations in different periods, how they originated and how they were maintained (Sørensen 1992, 31 in Díaz-Andreu 2005, 17).

- Status

Status is a term in archaeological literature that deals with social structure. Like the term 'prestige', it is hard to define (Schuhmann 2015, 23). Status seems to be a marker of hierarchy inside a society, so there are different kinds of status, ones orientated to the given system. Hence, one person has a lot of part-status (shared status) which together form the total status (Lamnek 2002). Status is the expression of the inequality between people. The inequality of wealth and power has been the subject of studies throughout the centuries, whether in the form of literary, myth, philosophy, or political discourses. The concept of the economic basis of social domination is in direct correlation with authority and wealth (Babić 2005, 70). Karl Marx, for instance, formulated this idea in the 19th century, imposing a strong image of the rich and powerful possessing splendid objects. Émile Durkheim (Durkheim [1912] 1947) also investigated the instruments of 'social control' over individuals, and Max Weber (Weber [1920] 1958) dealt with the terms 'voluntary submission' and 'exclusionary closure', which are bases for inequality. Over time, the model of society connected to the material found by archaeology was supposed to account for different forms of social organization (Babić 2005, 71). In the 1980s, the term 'control over resources' was introduced and discussed in connection with the mode of exchange in order to determine the social order. *The emergence of the elite in Iron Age society is explained by its role in external exchange, the control over production of the goods to be exchanged and the exclusive possessions of the ones received* (Babić 2005, 72). It was Ian Morris (Morris 1987) – amongst others – who noted that burial is a reflection of social structure, which in turn is a manifestation of ideology. P. Bourdieu used the term 'symbolic violence' in his concept of habitus, as a method to force individuals in line. He also used the term 'language of authority' (Bourdieu 1977). In the works of M. Foucault and P. Bourdieu, status is conceptualized as something socially constructed in interaction between individuals and groups (Babić 2005, 75).

Status often can be shown by innovative and foreign signs, as imported ceramics or bronze vessels (see the bronze situla at grave 13 in Mannersdorf/Leithagebirge in Lower Austria). These artefacts are called 'prestige objects', which may show the high status of the buried – or of the burying group, which we shall discuss. These 'foreign signs' are status indicating, whether as identity markers or indicators of a social group (Brosseder 2006, 129).

- Ethnicity? Group identity

From the very start, archaeology has had as one of its central projects the identification of 'peoples'... in the past (Lucy 2005, 86).

In 19th-century archaeology, the 'culture concept' for classifying was developed by Gustav Kossina. He preferred the *Kulturkreislehre*, which saw a direct relationship between language, people, and material culture (Kossina 1911). This had a great impact on Gordon Childe, who wrote that culture was certain types of remains, like pots, implements, ornaments, burial rites, house forms – which when combined gave the expression of a 'people' (tribe). Given the common equations often made between artefact distributions and group identity, these have tended to be reified as *ethnoi*, that is ethnic groups (Lucy 2005, 88).

Ethnicity has long been discussed in Austrian archaeology and historical research, as we can see with H. Friesinger and F. Daim about the Bavarians (Friesinger/Daim 1990), A. Pülz and E. Trinkl about

different views on 'the own and the foreign' (Pülz/Trinkl 2015), as well as W. Pohl and M. Mehofer together about identity in archaeology (Pohl/Mehofer 2010), and F. Daim (1982) about the ethnicity of Slavs and Avars (Pohl 2002). A very recent and interesting work is that of W. Pohl (2018), where he discusses the development of the term 'ethnicity' on the way to 'identity'. Starting with E. Zöllner in the 1950s (Zöllner 1950) and R. Wenskus (1961) with their critical evaluation of various characteristics such as origin, language, law, and customs, it was mainly H. Wolfram who worked on the ethno genesis of tribes in the case of the Goths (e.g., Wolfram 2009), as a development of different elements like 'tradition core', historical sources, and the various possibilities of interpretation.

Let us close with a remark made by W. Pohl (1998): *Ethnic identities were not simply 'there'; they were the result of identifications, of concrete action, social knowledge and of 'strategies of distinction'.*

Scientific/philosophic bases of identity

One valuable current approach to identity is that of Pierre Bourdieu: *Because social structures are engraved into the habitus, there tends to be a reproduction of these structures, particularly if the conditions at the time of application are identical with the formation conditions* (cited in Rehbein 2006, 92, 93); and: *the history of the individual is never anything other than a certain specification of the collective history of his group* (Bourdieu 1976, 189). When we examine the archaeological evidence, we can detect patterns of behaviour and action based on a set of group-specific standards where the habitus creates the material culture related to the group. Burials, i.e., the remains of mortuary rituals, are good indicators of identity. The replication of mortuary behaviour, e.g., a specific body position or arrangement of grave goods, suggests that people shared activities, beliefs, and thus identity, inasmuch as the knowledge about particular funeral rites and death symbolism is not easily accessible to non-group members. Burials combine evidence of the individual and social group.

Next to P. Bourdieu, who had an approach of identity, it was Anthony Giddens, the developer of the concept of consciousness (Giddens 1984), who noted that society should be seen as a thing that cannot exist without the people of whom it is comprised. In this vein I wish to mention R. Jenkins, who warns against reifying identity (Jenkins 2008) because nobody owns identity, and R. Brubaker, who played with the idea of group-building (Brubaker 2004). A. Barnard and J. Spencer were among the first to note that identity is very ambiguous to explain, as it can refer both to individual identity and group identity (Barnard/Spencer 1996).

In this project I seek evidence of different subgroups within the large group of graves with anthropologically male skeletons (which doesn't automatically mean that these individuals had been seen as 'male' in their own times).

Evidence from funerary material culture

Death rites achieve a processual character – with the occurrence of death – that involves not only the dead, but also the whole community in an oft'times long-lasting process of transition (Veit 2008, 26).

The presence of skeletal remains that contain markers of biological sex does not necessitate that any gender identity will be marked and/or visible in a mortuary context (Jordan 2016, 880). A corpse is only the lifeless image of a living person, so grave goods are mere indications of the former practical function that they performed (Veit 2008, 26). Nevertheless, grave goods are closely related with the dead (or rather the formerly living), and thus intrinsically involved in embedded ideas and discussions of the deceased. These discussions are mediated by the practice of the next of kin who by definition have a close relationship to the deceased. More specifically, grave goods belong to the worldly property of the dead and are identified – in the imagination of the burying community – with the deceased person (as they have died with him). Grave goods are specially chosen, for their characteristic relationship to the deceased's personality and his/her social roles. Grave goods may be traces of burial rites, having participated in its conspicuous qualities or documented its identity (Jung 2008, 274). Broadly, there are three participants in the burial rite: the dead, the family, and the local society (Brather 2008, 153). The dead individual may be characterized by their status and prestige. The family, in turn, is very interested in stressing the social rank and prestige of the dead through the adequacy of ritual, as this reflects on the family. The local society – of

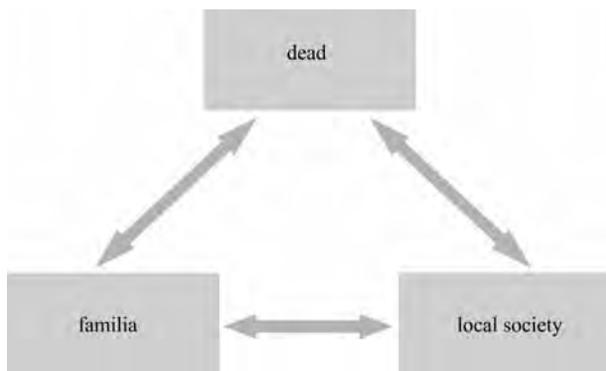


Fig. 3. Dead/familia/local society.

which the family is a participant – harbours expectations of public ceremony (Fig. 3). In Roman law, *familia* is (among other things) all the people in a household (from slaves up to the master; *Leonhard 1909*, 1980–1982). Similar structures are hypothesized for non-Roman societies (*Karl 2007*, Fig. 4). The excavated image is often an idealized view that does not reflect social reality, but offers a retrospective view of the identity of the dead. Thus, it can be seen as the result of a transition process that starts with the demise of a person and ends with the final closing of the grave and/or finalization of all the burial rites (which can often last very long).

MASCULINITY IN RESEARCH

Male identities (?) – state of research, theory

In order to describe the basis for choosing this research topic and to show how it was developed, in this chapter I shall give a short overview of the topic of masculinity in research.

It is justified to ask why there is a tendency to analyze male identity nearly exclusively from the war-like perspective. After all, this tendency is still commonly encountered in archaeological literature. For my purposes, however, it is the result of a male-dominated society, science included.

Not only in times of MeToo#, the loud discussions about changing advertisements of typically male products like Gillette razors, and the apparent (imaginary?) increase of male violence, is it more than logical to have a look at research pertaining to masculinity (*Stöcker 2019*). As mentioned above, this project started only with the aim of examining male graves in the Iron Age cemeteries in parts of Central Europe to see structures and different kinds of identities. Extensive review of the literature indicates that research on masculinity seems deeply overshadowed by the discourse on feminism. Masculinity strikes me to be hiding in this area, if only because of ‘tendentiously conservative research’ on the topic, as *Männerbeben* (*Hoffmann 2007*) or *Das entehrte Geschlecht* (*Bönt 2012*).

Over the past decades, masculinity has been little more than an unmarked, unseen category, though it had a certain place within gender research. The diagnosis of the ‘problem case man’ is ubiquitous in the media, be it as incidents in towns, or as failures of education. Whether men are the ‘crises’ and stand at the abyss is not the question, for maybe that is the place where they should stand. Today, the specific masculinity in historical, geographical, ethnic, and socio-cultural context is interesting. Gender research upended the traditional, society-founding gender-binariness (*Horlacher/Jansen/Schwanebeck 2016*, 2). First, I will briefly summarize the textbooks and overviews on masculinity research. One of the first was R. W. Connell’s *Masculinities* (*Connell 1987*), followed by her *Der gemachte Mann* (*Connell 1999*), then Bret E. Carroll’s *American Masculinities* reflected on American male myths (*Carroll 2003*). Later, *Men and Masculinity* by M. S. Kimmel and A. Aronson (*Kimmel/Aronson 2004*) is to be mentioned, as well as Michael Flood with his *International Encyclopedia of Men and Masculinity* in 2007 (*Flood et al. 2007*) and Ruspini in 2011 with *Men and Masculinities around the world* (*Ruspini et al. 2011*). One of the first German-language textbooks is *Handbuch der Männlichkeit* by Stefan Horlacher, Bettina Jansen, and Wieland Schwanebeck in 2016 (*Horlacher/Jansen/Schwanebeck 2016*), not to forget the impact of the Arbeitsgemeinschaft ‘Theorie in der Archäologie’ as we can see in the paper of N. Müller Scheefel (*2011*).

In English-language sociological research of the 1980s and early 1990s, masculinity won more contour. For example, K. Clatterbaugh (*1990*) mentioned six perspectives on masculinity: a) conservative (coming from nature), b) pro-feminist, c) legal, d) spiritual, e) sociology-Marxist and f) group-specific.

The initial breakthrough text was T. Carrigan's and B. Connell's "Toward a new sociology of masculinity" in 1985 (Carrigan/Connell/Lee 1985). A. B. Knapp mentioned the a) reactionary masculinities, where 'weekend warriors' play the 'wild man' with 'Zeus energy' vs. b) motivated masculinities, who have taken on board the radical implications and ideology associated with feminism (Knapp 1998a, 92). He also argued, that "a gendered archaeology must involve men and women in order to make gender a more dynamic, multifaceted concept within archaeological interpretation" (Knapp 1998b, 371). Research has been underway since the 1980s in the German-speaking world, but the discussion became earnest not until the turn of the century.

What may come as a surprise is that research on masculinity started way back in the 19th century. Here I need mention C. F. Pockels (1808) with his work *Der Mann: ein anthropologisches Charaktergemälde seines Geschlechts* and Friedrich Ehrenberg with *Charakter und die Bestimmung des Mannes* (Ehrenberg 1822). Since the 1960/70s the main influence was that of theoretical American psychology. Since the 1980/90s they exerted even more impact, but mainly non-scientific, more populist than before 1980. Examples include the doctoral thesis *Männerphantasien* by Klaus Theweleits in 1996, and the first inventory "Kritische Männerforschung" (Theweleits 1996). They followed the bases and programs of feminist theory.

Important theoretical basics include:

R. W. Connell with her concept of 'Hegemonic masculinity'. This Australian sociologist starts from multiple masculinities related to one another. She thinks that it is important to investigate these relationships, which are formed by an interaction of race, gender, class, and many other factors (Connell 2006, 76). So she provides variants of masculinity for the gender system by dividing into Hegemonic Masculinity, Subordinate Masculinity, Complicit Masculinity, and Marginalized Masculinity. However, these divisions should by no means be regarded as static and unchanging and must always be set in relation and comparison with each other.

The concept of hegemonic masculinity is at the center of masculine-theoretical debates. By hegemony Connell understands a cultural dynamic in which a male group claims the leading position of social life and thus maintains a patriarchy in which women have subordinate positions (Connell 2006, 77, 78). This model of masculinity is thus seen and accepted as a social and cultural ideal, although few men reach it in reality.

Another important and heavily discussed concept is that of P. Bourdieu: Masculine habitus (... *the endeavor, to dominate other men, and secondarily, as an instrument of symbolic struggle, women...*). Pierre Bourdieu's concept of the sexual habitus (Bourdieu 1997), which is an important concept in the social science debate on masculinity and femininity, is based on the unquestioned assumption of 'natural' bipartisanism. To analyze the inequalities in gender relations, the sociologist wields his concept of habitus, by which he attempts to recognize and analyze the patterns of action, thinking, perception, and behavior of individual persons and their interrelations and entanglements with the social structure (Liebsch 2000, 69). Bourdieu mentions that men have an incorporated behavior that has been shaped by their social position, for example, by the cultural milieu or the society in which they live. Thus, an incorporated behavior serves as a social sense of direction. In the sexual habitus, these collective actions and interpretation practices are tied to the body of the man or woman and interpreted as socially 'female' and 'male'. Thus, the body becomes a 'gendered reality' (Liebsch 2000, 76).

Also, particular clothing and particular physical postures or gestures are categorized as socially male or female. The classification in social space is made 'male' and 'female'. For example, politics is more likely to be associated with the 'male' – and family with the 'female'. The assumption of what is male and female is so fundamentally incorporated into society that it is understood as natural and invariable. Brandes believes that people feel personally attacked when the social interpretation of male and female is questioned because it is anchored in their sense of self and their self-perception as men and women (Brandes 2002, 74). This obfuscates Bourdieu's view that the male habitus is also socially constructed, and makes the power relations of men as superiors and women as subordinates appear to be the natural social order (Bourdieu 1997, 44, 45).

The main topics of sociologic research have been: 'Man in employment', which deals with work as a basis of the male role in society (at least in the 19th and 20th centuries); 'Male socialization' as the appropriation of adult masculinity in the interaction of peers and the competition between them. The 'Man in the family' is connected with gainful employment, his position inside the family as the breadwinner of the family, and his commitment to the family (Meuser 2016, 224). A main topic is also 'violence' and

'masculinity', where we can see that male violence is directed not only against women, but also against men. Violence against women is a way to overcome doubts over their own masculinity, as well as a way to maintain dominance. Sexuality is also an important point in research of masculinity. L. Böhmisch (2003) mentioned that sexuality and emotion seem to be decoupled, that this is the modus of sexuality, which corresponds to the script of male sovereignty. The onset of risk, anonymous sex, avoidance of emotional closeness, were part of the script, sexual functioning was considered a proof of masculinity. On the other hand there is a big discrepancy between the cultural images of male sexuality and the daily experience of men (Segal 1990).

Talking of masculinity and violence, we have to mention also the (often popularly used) term 'toxic masculinity' (Urwin 2017). It starts with the *topos* that women take care of the children and prepare meals, whereas men go hunting because of their physical prowess. A big role is also played by the connection between masculinity and military strength. This seemed to be a logical connection, but the start of compulsory military service with WWI robbed the freewill of men, making their previous kind of masculinity obligatory. Moreover, military and political leaders introduced a new kind of state-sanctioned masculinity that they then applied against pacifists and conscientious objectors. This and the change in society after WWII, when women increasingly aspired to the world of work (also for economic reasons), unsettled the traditional role model of men. Today it is necessary (in a 'core family') for both partners to work in order to finance themselves (Urwin 2017, 43).

'Toxic masculinity' starts with the socialization of boys by forbidding them to cry, by social conditioning, aggression, risk, and mob-mentality. Being trained to show no emotion, admit no weakness, ignore illness (so, not going to the doctor) is a mixture that is not only toxic for physical, but also for mental health. In addition, the superficial picture of the 'ideal man' in modern masculinity promotes this phenomenon. All of this contributes to a culture of rape and the frustration of 'male virgins', as Jack Urwin aptly put it (Urwin 2017, 184).

At this point it is important to mention that the connection of crime and public violence is still associated with men (Meuser 2002). Nevertheless, research shows that it is also increasing among girls and women (Bruhns 2002). Violence is regarded as a prolongation of the norm of masculinity and at the same time as incompatible with femininity (Hagemann-White 2002).

Research into masculinity in Eastern Europe is rather limited. Because I found no evidence for the Slovak Republic (ironically), I used some data regarding the Czech Republic. R. Pynsent (1994) mentioned the presentation of Czech males in a 'culture of suffering'. They are martyrs, masculinity is historically linked to passivity, self-denial, and masochism. For example the literary figure *Švejk* is characterized by conformism, a lenient moral attitude, and unheroic realism. This social phenomenon is also called *Švejkism*. Ewa Mazierská in the 1970/80s described the Polish actor Zbigniew Cybulski as the ideal-image of a man – on the one hand, he behaves like a gunslinger, on the other hand, he also enjoys being a narcissist in a feminine manner. There are single projects and publications on masculinity research from Putna (Putna 2011) and Seidl (Seidl 2012), though broad research in the field is still lacking. Stanislav Komárek summarized the situation with his book from 2012 *Muž jako evoluční inovace?* (Man as an evolutionary innovation?).

There are mostly just isolated projects in Austria, as well. One of the few researchers is Paul Scheibelhofer (University of Innsbruck), who describes processes of social production and negotiation of masculinity in the context of migration. Based on the study he carried out in Austria, he presents on the one hand a differentiated analysis of the social conditions under which 'foreign masculinity' is made a problem and devalued (Scheibelhofer 2018). A topic that strikes me as curious is that of mountain guides in Switzerland by Andrea Hungerbühler (Hungerbühler 2009). That work also deals with questions of the historical and local context of the construction of masculinity in connection with the interaction of submission, self-assertion, and resistance between men. Another interesting study concerns the gender-construction of juveniles in connection with the consummation of alcohol (Landolt 2009). The collective drinking of male youngsters seems so normal that the non-drinkers have to explain their behaviour. The picture of a sexually potent, physically strong, and heterosexual man is constructed by the consumption of alcohol. In contrast, young females who drink a lot may put themselves at risk of sexual molestation through losing control. With the strategy of 'passing', they successfully pretend to drink more than they actually do, participating in a multi-layered game of simultaneously undercutting and reproducing sanctioning norms regarding female alcohol consumption (Landolt 2009, 261).

THE ORGANIZATION OF IRON AGE SOCIETIES

The La Tène culture should be primarily understood as a network of local cultural phenomena. During the nearly five hundred years of the La Tène, the economy, settlement structures, funerary customs, artistic styles etc. of these societies changed continuously, compelling archaeologists to divide Late Iron Age chronology into several phases.

There was never a homogenous La Tène culture across Europe, in spite of past assumptions, though some of the often used maps continue to illustrate it as such. However, several territories show a certain uniformity (which also differentiates them from their neighbours) concerning several aspects, like artistic style and burial customs. This uniformity is most likely the result of several networks of interaction that operated at both the local and regional level. Rudolf Echt early on suggested that La Tène culture is just "... a communication system..." (Echt 1999, 253). Understanding these communication systems or networks – both terms being more appropriate than ‘archaeological culture’ – brings us closer to a proper understanding of the ways in which human societies functioned and interacted over time. Nowadays, the term ‘culture’ is frequently discussed within the framework of globalization, perhaps also because of the seeming loss of its identity-related connotations (Burmeister/Müller-Scheefel 2006, 10). Thus the definition of culture has moved from its earlier connotation as ‘entity’ to that of a ‘simple construct’. Furthermore, it was used as ... *Begriff zur Bezeichnung einer bestimmten Gruppe von Menschen samt der von ihnen hervorgebrachten geistigen und materiellen Produkte...* [... a term to designate a particular group of people, together with the spiritual and material products they produce...], or as a holistic phenomenon incorporating... *ethnische, kulturelle (einschließlich religiöser), soziale oder auch ökonomische Einheiten...* [... ethnic, cultural (including religious), social or even economic units...] (Kistler/Ulf 2012, 26, 27), in contrast with the existing fragmentation, diversity, or alterity. More recently, culture was defined anthropologically from the perspective of individual or group identity as a social process, thus influencing the concept of ‘identity’ in archaeology as well (Díaz-Andreu/Lucy 2005, 1). In the past, identity has usually been equated with ethnicity, but anthropological studies have shown that identity also incorporates features related to other types of social affiliation, such as age, religion, gender, and status. More recently, statistics have been used in archaeology to identify these social groups within ancient communities (see Trambley Cormier/Nakoinz/Popa 2017). Returning to the concept of network in archaeology, at the most basic level it consists of a set of links and nodes. Methodologically, the most important thing is to define both the links and the nodes, because they are part of telltale processes of interaction. Analysis of these processes can contribute to the identification of specific local, regional, and trans-regional patterns (Knappett 2013, 3). Accordingly, network analysis is one of the main means of identifying and analyzing the impact of social connectivity at various spatial and temporal scales. This is because allows us to discuss the ways in which these networks or communication systems worked, as well as their influence on different communities. Such analysis takes into consideration the La Tène cemeteries in Lower Austria, in the aim of identifying some of the connectivities which were established within certain areas of Central Europe (Ramsl 2014a). As mentioned before, the La Tène culture seems to be a communication system consisting of often overlapping local and regional networks which operated at various social levels. The mapping of regional groups in the early La Tène period points to the apparent diversity of the La Tène culture (Ramsl 2018b, Fig. 1). Nevertheless, at a wider temporal level, from the beginning of the La Tène period to its ‘afterlife’ within the following dominant cultures (Roman, Germanic, etc.), it is difficult to compare early La Tène culture with its late iteration, since there are different artistic trends, social systems, customs, even different combat styles and so forth. Accordingly, one might ask whether there is something like La Tène culture at all.

The La Tène societies consisted of "... family groups, sub-ethnic communities and ethnic communities...", if we want to follow Manuel Fernandez-Götz (Fernandez-Götz 1994, 41).

Smallest unit: the household/familia (Fig. 4)

During this period, local communities inhabited small villages and farmsteads. The core must have consisted of persons connected by ties of consanguine kinship which could also include people like friends, clients, and slaves (Roymans 1990) – summarized: a *familia* (Mattingly 1992, 35, Fig. 2: 2), which

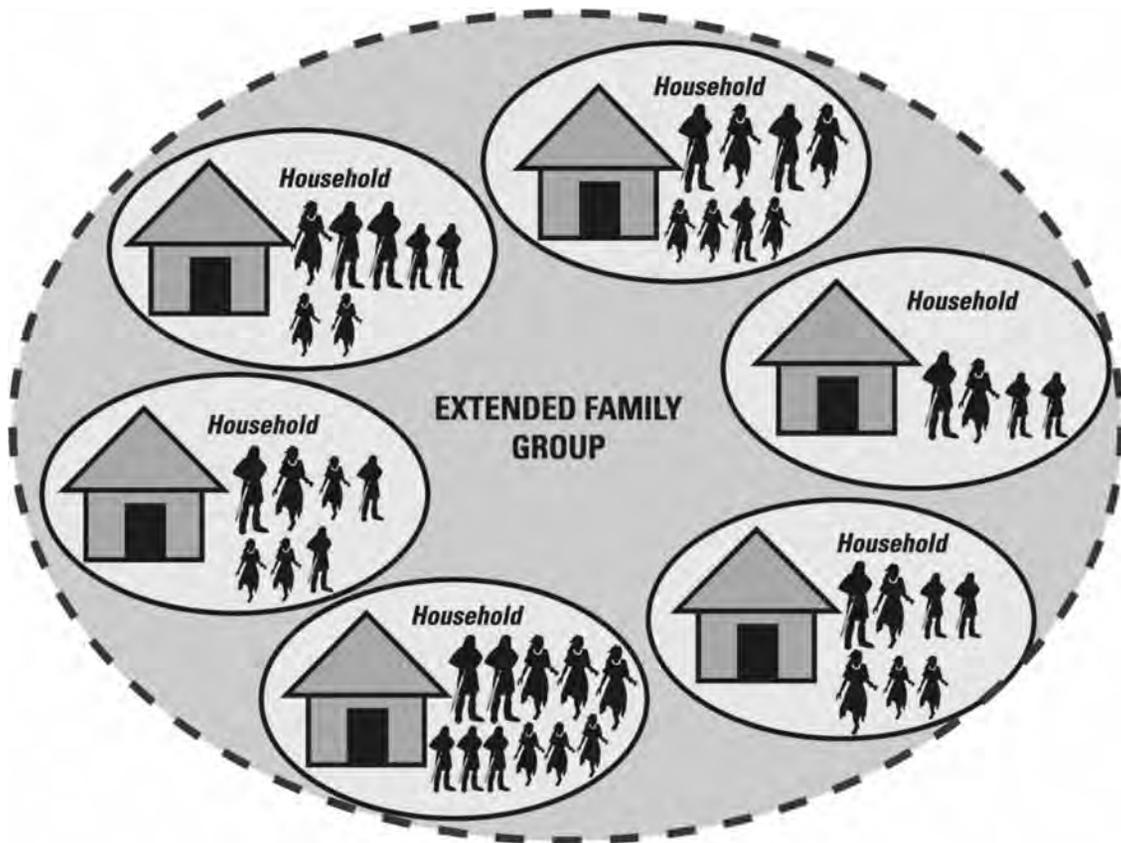


Fig. 4. Household (after Fernández-Götz 1994).

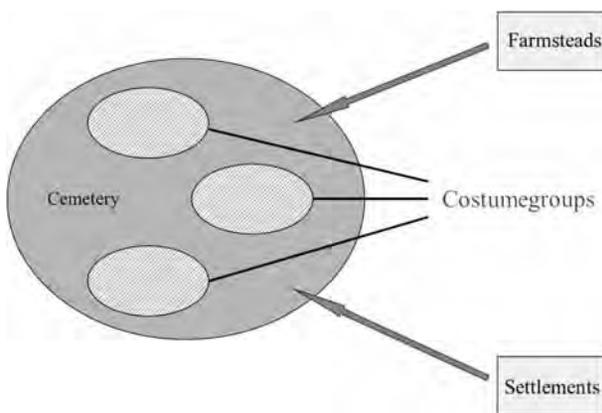


Fig. 5. Local connections (graphic P. C. Ramsel).

we may call an 'extended family' (Fernández-Götz 1994, Fig. 3: 5). The local group includes people who interact on a daily basis in small-scale social contexts in small spaces like farmsteads and/or a group of farms. They buried their deceased in communal cemeteries. The costumes of the female deceased included annular ornaments, and this is apparently a very local feature. However, different costumes were used by different social groups within the same cemetery and during the same phase (Ramsel 2011, 250; see also a related pattern in Rustoiu 2013). These costume variations may point to people belonging to different local populations or to different social groups (Fig. 5).

Sub-ethnic groups, tribes

Many terms and concepts have been applied for the next one or two levels of prehistoric Iron Age Society, such as "Personenverbände" (or e.g., *pagi* and *civitas*, see Fernández-Götz 1994, 52), tribes (Moore 2011; discussion and overview e.g., in Whitehead 1992 and Mattingly 1992, 32, 33) or chiefdoms (e.g., Carneiro 1981). They act in the proposed interpretative model within regional connectivities. The analysis of settlements and their cemeteries points to particular regional similarities, like those from the Traisen valley or the surroundings of the Leitha hills. Their features can be compared to those of similar areas like

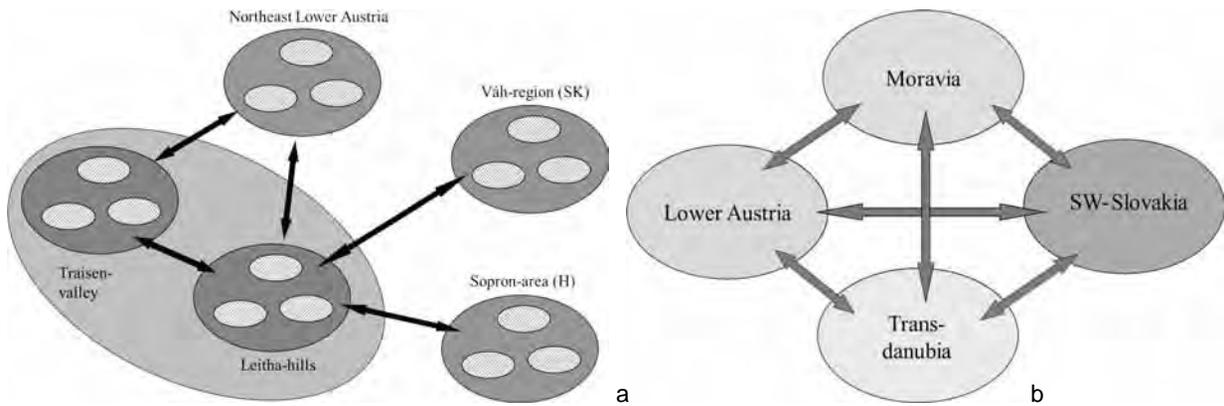


Fig. 6. Regional connections – trans-regional connections (graphic P. C. Ramsel).

the Weinviertel in Austria, the Vah region in Slovakia, and the Sopron area in Hungary (Fig. 6a). Examples of regional connectivity can be provided e.g., by pottery workshops or, more precisely, by seasonal itinerant craftsmen who moved across a wider but well-defined area. Their movements and activity are demonstrated by the presence of identical ceramic stamps in Lower Austria, Burgenland, and Transdanubia (Neunkirchen, Mannersdorf/Leithagebirge, Sopron-Krautacker and Pottenbrunn; see Ramsel 2011, Fig. 173; Zeiler et al. 2010).

The above-mentioned groups also reach the next levels of acting in the investigated region as trans-regional connections which were established between different areas, including Lower Austria and Moravia, south-western Slovakia, and Transdanubia. One interesting example is provided by the ornamentation of bracelets. These hollow sheet bracelets have the tube lock decorated with a criss-cross pattern. Similar bracelets have been found, for example, at Hevız in Hungary, Dubník (*Bujna* 1989, Pl. X: 8, 9) and Maňa (*Benadik* 1983, 114, Pl. XXXI: 84: 6, 7) in Slovakia, Brno-Maloměřice (*Čižmářová* 2005, Fig. 61: 14), and Lovčičky in Moravia, as well as at Mannersdorf/Leithagebirge and Hainburg in Lower Austria (*Müllauer/Ramsel* 2007; Ramsel 2011, 190, Fig. 157b). Their distribution is largely a result of trans-regional interactions (Fig. 6b).

The last step in this proposed interpretative model is to identify long-distance connections. Archaeological evidence indicates that the populations from Lower Austria established significant westward connections with the Champagne area (eastern France) in the La Tène A period. Other connections seem to have occurred later, notably with populations from Switzerland, the Rhineland, and northern Italy. However, it has to be noted that all of these regions were interconnected into a wider cultural network (Fig. 7). These connections and interactions take place on the 'macro-category level' (*Fernández-Götz* 1994, Fig. 3: 6) or the 'international level' (though admittedly there were no nations at that time). They are interpreted as 'tribal states' or 'city-states' (e.g., *Collis* 2000; *Fernández-Götz* 1994, 56) and were in fact much larger than Greek *poleis*, as they could extend across an area of about 10–20,000 km² (*Collis* 2010) and had up to 100,000 inhabitants. We could put them into the category of 'early state' or 'ethne' (*Hall* 2007).

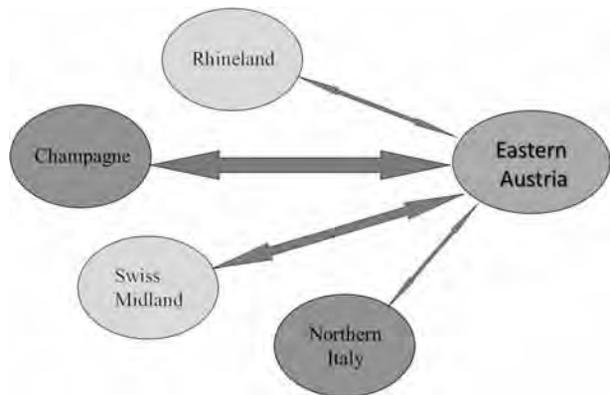


Fig. 7. International connections (graphic P. C. Ramsel).

BURIAL RITES

In this chapter, I give a basic overview of the burial rites in the research area. Social interactions at regional and long-distance levels shaped the ways in which various identity constructs were defined and expressed, and even more so in the case of such highly mobile individuals or groups, as the ‘Celts’ seem to have been.

Basically, one can differentiate between inhumation and cremation burials during the La Tène period. The burial of a complete human corpse is called inhumation. If the body was burned and its remains buried, one speaks of a cremation burial.

Inhumation

Orientation

The orientation of an inhumation burial is indicated by the position of the head. For example, if the head is in the south of the grave shaft and the feet are in the north, we are talking about a south-north or, more simply, a south orientation.

With regard to orientation, the individual cemeteries should first be considered and then compared with each other and with other regions. In the cemetery of Mannersdorf am Leithagebirge 52% of the burials are aligned south-southwest, 17% southwest, and the rest mostly to the south and southeast. The necropolises in the well-known Traisen valley, on the other hand, tend more to the southeast: in Pottenbrunn, 38% of the graves face southeast, 25% south-southeast, and 12% south. In Oberndorf ob der Traisen the main orientations were south-southeast and south, in Ossarn south-southwest and south-southeast. As a standard for the inhumation graves of the early La Tène period in eastern Austria, an orientation from the southwest to the southeast can be identified.

If we consider the subsequent middle La Tène period (LT C) north of the Danube, a change of orientation from south to north can be observed. This can be shown by the graves of Poysdorf (*Blesl 2010*, Fig. 5; *Preinfalk 2003*, 27), Absdorf (*Willvonseder 1932*, 274), Klein-Reinprechtsdorf (*Stift-Gottlieb 1935*), Jetzelsdorf (*Ruß 2004*, 771–774; *Ruß/Wiltschke-Schrotta 2008*), Steinebrunn (*Lederer 1980*, 460) and Bernhardthal, all of which are located north of the Danube in the Weinviertel. It is remarkable that in neighboring Moravia, the inhumation graves are principally orientated from north to south already in the early La Tène period (*Čižmářová 2004*, 91–93; the only exception is the cemetery at Brno-Chrlice where the orientation of the graves is from south to north, see *Čižmářová 2004*, 94).

Position of the body

Most of the Iron Age inhumation burials were in an extended supine position. Different arm positions can be observed. The arms are usually found along the body, but sometimes the forearms also rest on the pelvis (e.g., Mannersdorf, grave 174: right arm; *Ramsl 2011*, Pl. 177); Oberndorf, grave 1982/25: left arm; *Ramsl, in prep.*) Furthermore, the arms may be angled outwards (Mannersdorf, Grab 62: *Ramsl 2011*, Pl. 84) or bent so much that the hands are at the shoulders (Mannersdorf, Grab 96: *Ramsl 2011*, Pl. 104).

Looking at the legs, the position of the legs being extended parallel to each other dominates. Exceptions include crossed lower legs, such as occur in Pottenbrunn, grave 1003 (*Ramsl 2002a*, Pl. 79), with comparative examples in grave 18 of Vevey, Switzerland (*Martin-Kilcher 1981*, Fig. 22), and grave 20 of Dubník, Slovakia (*Bujna 1989*, Fig. 25), as well as ‘trapezoidal’ or akimbo leg postures, with the knees facing outwards (Oberndorf, grave 1982/18: *Ramsl, in prep.*). Next to the extended supine position, the lateral stool situation occurs in rare cases, as in grave 3 of Pottenbrunn (*Ramsl 2002a*, Pl. 26) or grave 86 of Franzhausen (*Neugebauer/Gattringer 1995/96*, Fig. 5: 4).

Number of burials in a grave

The majority of graves are single burials, but there are also double (e.g., Pottenbrunn, grave 5: *Ramsl 2002a*, Fig. 14), triple (Au am Leithaberge, Mühlbachäcker, grave 6: *Nebehay 1971*, 143), and even

quadruple (Oberndorf, grave 28: *Ramsl, in prep.*) burials. In the case of multiple burials, in principle, all gender combinations occur: for example, men with women (e.g., Pottenbrunn, grave 6: *Ramsl 2002a*, Fig. 16) men with men (e.g., Potzneusiedl, where two full arm equipments are in one grave shaft; unpublished; personal comment F. Sauer), and women together with women (e.g., Oberndorf, grave 18: *Ramsl, in prep.*).

The combination of adults and children also occurs: a child and a man were buried together in grave 60 of Mannersdorf. The child lay next to the burial of a 19–25 year-old man with a sword and (broken) spear (*Ramsl 2011*, Pl. 80). Remarkable is the contrasting orientation of the two dead. A similar case is known from Dubník, grave 2 (male, *maturus* I; child, *infans* III) in Slovakia, where the burials have the same orientation (*Bujna 1989*, 251 f.).

More common than the combination child–man is the combination child–woman: In Rassing, grave 7 a woman (30–40 years) and a child (8–9 years) lay next to each other in the same orientation (*Preinfalk 2005*). The same situation is encountered in Au am Leithaberge, Mühlbachäcker, in grave 3 (*Nebehay 1971*, 158, Fig. 5).

In the northeast corner of the burial chamber of grave 114 of Mannersdorf, amulets and two bronze bracelets were found, suggesting a child burial. The adult woman in this tomb had a bracelet with an S-shaped design as well as a Sanzeno bowl as extraordinary gifts (*Ramsl 2011*, Pl. 121). For comparison, two graves from south-western Slovakia are to be mentioned: in grave 20 of Dubník (*Bujna 1989*, 269) a woman (*maturus* II) and a child (*infans* II) were found, whose skeletons were heavily disturbed. In grave 129 of Maňa (*Benadik 1983*, 60) a juvenile woman (17–22 years) and a child (*infans* I, < 5 years) were found, the latter which could be a secondary burial.

Secondary burials

A special case is the burial of a 5–10 year-old child (*infans* I–II) 38 cm above the primary burial in grave 520 of Pottenbrunn (*Ramsl 2002a*, Pl. 12). The first burial is a 45–55 year-old man who, in addition to the usual weapons (sword, shield, lance), was also buried with arrowheads, a grinding- and a mortar stone, three knives, scissors, a scalpel-shaped iron instrument, and a propeller-shaped bone artefact. Perhaps one could call the man, in line with ancient sources, a ‘Druid’ (*Ramsl 2008*). Whether this function or social status has something to do with the secondary burial cannot be clarified.

Cremations

In principle, the following ways of depositing cremated remains can be observed:

- Ceramic urns: various vessel forms were in use. Bottle-shaped vessels are most common, e.g., in Pottenbrunn 48 (*Ramsl 2002a*, Pl. 55), but pots and ceramic fragments are also common (e.g., Ossarn 1984/6).
- Organic urns: these were most likely present when the cremated remains took up a well-defined, limited area. Different types of organic containers can be reconstructed from the shapes: small boxes (Pottenbrunn 972, 975, 1006), buckets, and organic containers. The scattered cremation in grave Pottenbrunn 400 is interesting in this context, as a fibula, undamaged by fire, was placed on top of the cremated remains. It could have served to fasten a cloth in which the cremated remains were wrapped (*Ramsl 2002a*, Pl. 55; compare grave 962 from the cemetery of Ludas [Hungary]: *Tankó/Tankó 2012*, Fig. 4).
- Scattered cremations: if the burned remains are not found in an urn, but on the grave bottom or in the grave filling, one speaks of scattered cremations. A distinction is made between cremated remains in a limited area of the grave pit (Pottenbrunn, grave 340), in the entire area of the grave pit (Pottenbrunn, grave 1002), and outside a wooden box in which a part of the grave goods have been found (Pottenbrunn, grave 975).

Furthermore, multiple incinerations occur, as at Inzersdorf, grave 282 (*Neugebauer 1996*, 161, Pl. 20, below) or Au am Leithaberge, Kleine Hutweide, grave 2 (*Nebehay 1973*, 5 f.). Also different combinations of cremation and inhumation burials in one grave are known: for example, in Pottenbrunn, grave 400; in Oberndorf, grave 2004/44 (one skeleton, one urn); in Ossarn, grave 1966/1 (urn next to skeleton) and grave 1966/4a (one skeleton with two urns and a scattered cremation).

As J. Meduna noted, burials in the cremation ritual occur in all stages of the La Tène period (*Meduna 1962a*, 135). The following is a chronological summary of the cremation burial in eastern Austria, which is mainly based on analysis of the cemeteries of Pottenbrunn, Ossarn, and Oberndorf in the Traisen valley. Important cemeteries such as Franzhausen, Walpersdorf, and Wöllersdorf can only be summarily treated here because their elaborations have not yet been fully published.

La Tène A

The continuous transition from the late Hallstatt to the early La Tène period can be best observed at the necropolis of Franzhausen. According to preliminary reports published until 1992, a total of 63 early La Tène cremation burials had been recovered, according to my own research in the find lists – but it could be up to 77. According to the number of graves, Franzhausen is at the top of the list, followed by Walpersdorf with 13 and Oberndorf with seven cremation burials.

With regard to the incineration of the funeral pyre, the following can be said: in the cemetery of Oberndorf, of the seven incinerations, four were scattered cremations, and in one case (grave 3/1982) an organic container can be imagined, as the cremated remains are located in a narrow confinement zone (Fig. 13: OBD 1982/3). The three other cremation burials are two urn graves and a corpse-free grave. In Walpersdorf, on the other hand, two scattered cremations were found.

Remarkable are the above-mentioned combined burials of inhumation and cremation graves, as in Oberndorf, grave 44/2004 (skeleton and urn, Fig. 13: OBD 2004, Grab 44), Ossarn, grave 1/1966 (skeleton and scattered cremation), and Ossarn, grave 6a/1984, where on the grave bottom a skeleton as well as two urns (with one or two cremation remains) and a scattered cremation were found. Grave 282 at Inzersdorf (*Neugebauer 1996*, 161) also contained two remains of cremations. It is noteworthy that only one La Tène A cremation burial contain weapons – namely, at grave 1 in Herzogenburg-Kalkofen (*Eibner 1981*, 30).

La Tène B1

The cemeteries of Pottenbrunn (*Ramsl 2002a*) with nine cremation graves and Au am Leithaberge, Kleine Hutweide (*Nebehay 1973*), also with nine cremation graves, are relevant for this stage. There are three known cremation graves from Ossarn and two from Guntramsdorf (*Urban/Teschler-Nicola/Schultz 1985*). In grave 2 of Au am Leithaberge, Kleine Hutweide, the cremation remains of two different persons could be determined (*Nebehay 1973*, 5). Altogether, almost twice as many scattered cremations are to be observed in this stage as urn burials. In seven grave pits no cremated remains could be observed at all. Four cremation graves were surrounded by roughly square grave gardens, two of them (Pottenbrunn, tomb 854 and 855) also had posts within these surroundings (*Ramsl 2002a*, Plans 8; 11).

Remarkable is a new equipment pattern which occurs at La Tène B1: Twelve out of a total of 25 cremation graves were equipped with weapons. In one grave (Au am Leithaberge, Kleine Hutweide, grave 13), even double weapon equipment was found, although only the remains of one person were buried (*Nebehay 1973*, Pl. X–XIII).

La Tène B2 to the beginning of La Tène C

Also in this period (contrary to general opinion) cremation graves are in the minority compared to inhumation graves. These are mainly individual graves, as in Flatz (*Haider 1984*, 269 f.), Horn (*Maurer 1976*), Sommerein (*Adler/Offenberger 1970*, 254 f.), Zöfing (*Neugebauer/Neugebauer 1981*) or Vienna 10-Oberlaa (*Pittioni 1930*, 49). In larger cemeteries such as Pottenbrunn, Mannersdorf, and Guntramsdorf up to three cremation graves occur.

Especially in the early phase of La Tène B1, cremation burials with weapons suddenly appear. In this period, between approx. 400 and 350 BC, the first phase of increased mobility and migratory movements in the 'Celtic world' is highlighted. The postulated 'mobile warrior class' (*V. Kruta, pers. comm.*) was equipped with short and narrow swords, which were marked at the mouth of the scabbard by an opposing pair of dragons or griffins.

Hence, the new burial rite could be related to the warlike events of that period. Warriors or even mercenaries who had died on these campaigns could have been cremated abroad by their comrades and their mortal remains (in the form of the cremation remains) returned to their home country. This thesis

is strengthened by the fact that hardly any injuries can be observed with the skeletons in the inhumation graves of this epoch, which does not suggest warlike events in their homeland (*Novotný in prep.*).

War would therefore have been an 'external event'. Even graves which contain grave goods but no human remains could point in this direction. The empty tombs of Pottenbrunn (objects 232, 961, 972, and possibly 1002) would then represent cenotaphs that served as a reminder of warriors who died abroad. Double weapon equipment, as in Au am Leithaberge, grave 13 or Potzneusiedl, grave 374 (*Sauer 2007*, 38 f.) could also support this opinion. But they could also point to a 'brotherhood in arms', as Markus Egg postulated (*Egg 1999*, 344–355).

Biritual graves

Furthermore, there are several types of combinations of inhumations and cremation graves:

- Double/multiple cremations, e.g., Inzersdorf, grave 282 (*Neugebauer 1996*, 161, Pl. 20), Au am Leithaberge, Kleine Hutweide, grave 2 (*Nebehay 1973*, 5, 6).
- Cremation(s) in addition to an inhumed body, e.g., Pottenbrunn 400, Oberdorf, grave 2004/44 (1 inhumation, 1 boxed cremation), Ossarn, grave 1966/1 (urn burial next to inhumation) and grave 1966/4a (inhumation with two urn burials and one scattered cremation).

SLOVAKIA

Research history and state of research

The first unique finds of La Tène graves from the territory of Slovakia date back to the early 20th century and hail from Seňa (1900), Kechnec (before 1903), Ipel'ský Sokolec (around 1920), Hronovce-Domaša (1925), Komárno-Veľký Harčáš (before 1928), and Stupava (1929). In the 1920s the first works of an analytical and comprehensive character appeared, ones based on the population of Slovakia in the La Tène period, i.e., in reliance on the grave finds. Beginning in the 1950s, B. Benadik rendered the most outstanding services to research in this field, for example, by publishing in 1962 the last known list of La Tène cemeteries in the area of Slovakia. According to Benadik, it is especially J. Bujna who has continued the scientific research related to the funeral and burial rites in the La Tène period on the territory of Slovakia. *J. Haruštiak (2009)* need also be mentioned. Hitherto published work indicates that the present territory of Slovakia boasts 120 La Tène cemeteries and individual graves. The total number of graves from Slovakia is however quite problematic, and it is possible to speak only of an approximate number of more than 1,052 graves. Of that number, approximately 60% are inhumations and 33% cremations. In the remaining 7% the classification is unknown. Among the well-studied and elaborated cemeteries, the sites Bučany, Dubník, Malé Kosihy, Palárikovo II can be mentioned. The findings on the large cemetery with almost 80 graves in Levica (discovered in 2005) remain to be published. Furthermore, there are cemeteries outside the area of Nitra, such as Nitra-Mlynárce, Nitra-Staré mesto (Nádvorie SPU), Nitra-Zobor (Kasárne), Nitra-Zobor (Šindolka), and the big cemetery (94 graves) in Palárikovo I with only partially published results. It is also necessary to complete the evaluation of the cemetery in Chotín (VIII/Sunnyogó) where more than 31 tombs have been evaluated and published. Similar situation can be observed on the cemetery in Hurbanovo (Konkol) with 21 graves. Research results have been partially published on the cemetery in Michal nad Žitavou with more than 16 graves. In recent years we may read works containing revised and updated evaluations of earlier published findings, regarding for example the burial ground in Hronovce-Domaša (*Brezňanová/Furman 2012*), Kuralany (*Kovár 2007*), Stupava (*Čambal 2012*) or Šurany-Nitriansky Hrádok-Zámeček (*Březinová 2012*).

From the whole corpus, 19 burial sites (15.8%) were analyzed by anthropologists and 16 sites (13.3%) by archaeozoologists.

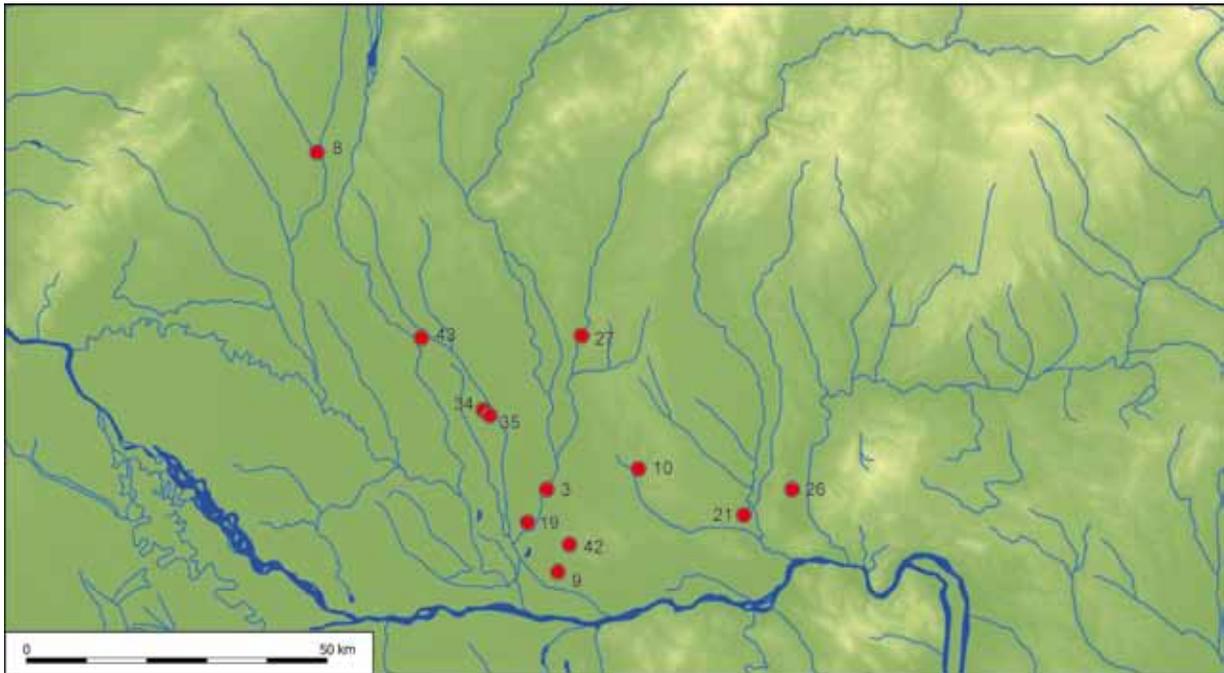


Fig. 8. Slovakia. Map with selected sites. 3 – Bajč; 8 – Bučany; 9 – Chotín; 10 – Dubník; 19 – Hurbanovo-Bacherov Majer; 21 – Kamenín; 26 – Malé Kosihy; 27 – Maňa; 34 – Palárikovo I; 35 – Palárikovo II; 42 – Sv. Peter; 43 – Trnovec nad Váhom – Horný Jatov.

Cemeteries (Fig. 8; 10)¹

Eleven cemeteries were selected because of their solid documentation and the presence of anthropological data. Even sites like those of Bajč and Palárikovo (where full analyses and elaborations have yet to be completed) could be used by getting the databases from the Department of the Scientific-Technical Information and Restoration Laboratories (Ing. Elena Blažová), Dr. Anna Gardelková-Vrtelová (Bratislava), and Mag. Mónika Görföl (University of Szeged, 2017).

Bajč (BAJ), distr. Komárno

A La Tène settlement was found in several areas on sand dunes between the now disappeared waters of the river Žitava. The individual areas are 1–3 km apart and form a dense network of La Tène settlements and cemeteries on the lower Nitra and Žitava rivers. First, a La Tène biritual cemetery was found on a sand dune between the villages Bajč and Vlkanovo, site Vlkanovo I. The whole burial ground has not yet been excavated; some graves were destroyed during the construction of the road and later sand extraction. In 1956–57, Mária Hrmová-Rejholcová of the Institute of Archaeology of the Slovak Academy of Sciences (IA SAS) carried out a rescue excavation.

A total of 68 graves are known from this site, including 53 inhumation and 15 cremation graves. One cremation grave (no. 47) belongs to the Late Bronze Age and it is uncertain if two of the inhumation graves (no. 21 and 57) belong to the Celtic cemetery due to a different orientation of the deceased (the head rested in the northwest) and poor or missing grave goods.

Two grave clusters are recognizable around the inhumation graves 22 and 65, which disclosed rich grave goods in a spacious grave pit surrounded with a square-shaped trench. Remnants of another tomb discovered near tomb 67 indicate that the number of tombs may have originally been higher. Among the

¹ Schematic graphics of La Tène burials in Slovakia: for Slovakia, the cemeteries of Bajč, Bučany, Chotín, Dubník, Hurbanovo-Bacherov Majer, Kamenín, Malé Kosihy, Maňa, Palárikovo I, Palárikovo II, Sv. Peter, and Trnovec nad Váhom – Horný Jatov have been chosen because of the quality of the datasets. Some graves are not included because of severe robbing. General legend for all figures presenting schematic graphic in the book shows Fig. 9.

46 anthropologically evaluated bodies in the graves 17 men, 14 women, and 6 children could be distinguished. Weapons were represented in five graves. From two come unique spearheads with long sockets. A more recent burial phase is represented by the cremation graves 40 and 52. From no. 40, a bronze anklet with molded decoration was found; no. 52 revealed a rare arm ring with a profiled band body with remarkable pseudoplastic shell-shaped knots. During observations, a fragment of a dark blue glass arm ring with oblique knobs on the midrib was found, which is decorated with a thin white wavy line. This ring leads to a late-stage dating of LT C1. The inventory of the inhumation graves can be dated to the transitional period of LT B1/B2, and to the early stage of the LT C1. Secondly, a La Tène inhumation grave is known, one which however was destroyed in 1955 inside the village Bajč (*Benadik 1955; 1960; Březinová 1999; Bujna 2012a; Točík 1964; 1978*).

Bučany (BUC), distr. Trnava

A late Hallstatt to early La Tène cemetery including cremation graves of the Vekerzug group at the Kopanica site, on the edge of the Löss-terrace along the Dudváh River. Rescue excavations from 1978–1981 by the IA SAS under the direction of P. Romsauer and J. Bujna revealed over 190 objects of the Neolithic, Bronze age, and Hallstatt period over an area of about 6 hectares. 55 graves were then examined. Among them, 32 inhumation graves can be dated to the late Hallstatt and the early La Tène period. That this settlement follows that of the Kalenderberg culture is shown by the installation of inhumation grave 27 over a Hallstatt settlement object.

The early burial phase, represented by Grave 1 and also 2, 6, and 32, corresponds to the transitional horizon between late Hallstatt and early La Tène culture – Ha D3–LT A1, i.e., the first half of the 5th century BC. Grave 1 yielded a late variant of the iron *Fußzierfibel* and massive ribbed foot rings. The tombs 2, 6, and 32 have ceramic grave goods in Hallstatt tradition, e.g., smoothed decoration on the inside of cups and bowls. Graves of the older phase are concentrated in the northeastern cemetery part.

The younger phase represent tombs with fibulae with early La Tène bird heads, wire brooches, ring jewellery, bronze sheet metal foot rings, two-piece iron belt hooks with box-shaped applications, and La Tène ceramic forms, e.g., a bowl with rich stamp decoration on the inside representing the fully developed phase LT A2.

As for weapons, lances and swords occur in this phase (see grave 18). The orientation of the burials in inhumation graves with the head in the south agrees (despite a few deviations) with the predominant orientation in the Celtic cemeteries of LT B1–LT C1 from the area of southwestern Slovakia. One of the differences concerns food grave goods. Among them, meat predominates from goats/sheep, whereas pork, which is the most widespread meat ingredient in the early to middle La Tène graves, is not found at all. On the area of the early La Tène cemetery, four graves were uncovered – 7, 33, 37, and 38 – which contain an inventory of the Vekerzug cultural group, such as snake-like temple rings made of silvered bronze. These prove the likely contact of the LT A Celts with the Hallstatt period population of the Vekerzug group during the 5th century BC (*Bujna 1991a; 1993; Bujna/Romsauer 1983*).

Chotín (CHO), distr. Komárno

At Chotín, there are two Celtic cemetery areas. The first LT cemetery was found southeast of the village, at site VIII. The graves were destroyed by sand extraction. In 1960–61, during rescue excavations led by M. Dušek (IA SAS), 16 inhumations were found. Some of them had a wooden construction and were surrounded by square trenches. As a result of renewed sand extraction in 1965, more graves were destroyed east of the excavated area. Priska Ratimorská saved the inventory of three inhumation graves. During subsequent rescue excavations by the IA SAS (under the direction of J. Béreš), three other inhumation graves were investigated. Unfortunately, these had been robbed. Later, in 1975, during work led by J. Bujna, four body graves were discovered, one of them with equipment. The tombs date from the end of LT B1 and most from LT B2, i.e., the last quarter of the 4th to the first half of the 3rd century and probably from the older part of a larger cemetery. The graves have yet to be elaborated.

Secondly, a biritual LT cemetery was located west of the village, at “Chotín X”. This facility is located about 4 km directly NW of site VIII. During sand extraction on a sand dune, graves were destroyed. From graves 1–3 the inventory was saved. During the rescue excavations in 1971–72 (Museum in Komárno, Podunajské Múzeum, under the direction of P. Ratimorská) 44 graves were excavated. Of the total

47 graves, only four are cremations. In 12 inhumation graves and one cremation grave weapons were present, and this represents a high percentage. In all weapon-equipped tombs an iron sword in a scabbard was found. From the inhumation tomb of a warrior (no. 14) comes a two-piece bronze arm ring with hinge closure with rich filigree decoration. The bracelet was made in casting technique in lost form and has signs of wear over a long time. Standing out among many pottery items in the rich woman's grave (no. 21) is a simple vessel on a profiled foot – a kantharos – which had a Hellenistic template. The buried man in grave 34 had a gold and a silver ring on the left hand and had a tool set with him – an axe and three files (*Bujna 1976; Dušek 1956; 1961; Gebhard 1989; Ratimorská 1981; Točík 1959*).

Dubník (DUB), distr. Nové Zámky

Here was discovered a Celtic biritual burial ground on a high terrace northwest of the village. During rescue excavations, which were carried out in 1982–84 by the IA SAS under the direction of J. Bujna, 30 graves were examined and from three others the grave goods were rescued. The burial ground was not completely excavated. Out of the total 33 graves, only five were cremation burials. The site contained eight rectangular surroundings, two of which were connected to one system. Some graves had square grave pits with wall lengths between 13–17 m. Swords appeared in eight tombs, and four sheaths were adorned by Dragon motives arranged in opposition to each other. The warrior from grave 17 had a gold ring on his left hand. From the female grave 21 comes a magnificent neck ring made of many pieces of pierced sea coral and a large number of glass beads, including so-called amphora beads. The cemetery belongs to LT B1 and the older phase of the stage LT B2. It covers the second half of the 4th to the first quarter of the 3rd century BC (*Bujna 1989; 1991b; Szabó/Petres 1992*).

Hurbanovo-Bacherov Majer (H-BM), distr. Komárno

La Tène settlement area, which was discovered in several sites on sand dunes between the now disappeared waters of the Žitava river. The first Celtic biritual cemetery was found west of the city, in the "Abov kopec" (Abadomb) site. Several graves were destroyed during vineyard work on the sand dune. Only one part of the site was excavated during work carried out in 1952–53 by P. Čaplovič of the IA SAS on an area of 25 x 50 m. There are 15 inhumation graves and a cremation tomb of the La Tène period. Only one grave contained weapons – namely, two lance tips. As a result of continued sand extraction, an unknown number of graves were destroyed. From three graves, the employee of the Podunajské Múzeum in Komárno saved a part of the inventory. The finds of the graves indicated the LT C1, i.e., the second half of the 3rd to the first quarter of the 2nd century BC. A second La Tène cemetery was found northwest of town at the Bacherov majer site, about 2 km directly northeast of the "Abov kopec" site. During the excavations mentioned above, only a part of the cemetery was excavated on an area of 30 x 40 m; 13 inhumation graves were uncovered. Swords were found in three and a lance in one grave. Originally, it seems to have been a larger necropolis with funerals ranging from LT B1 to LT C1. A third Celtic biritual cemetery was found north of the village of Bohatá, about 4 km from the Abov kopec cemetery and about 2.5 km to the northeast from the Bacherov majer site. The rescue excavations carried out in 1972 by the IA SAS under the direction of M. Rejholcová exposed a large early medieval cemetery and 21 La Tène graves, of which 12 were inhumations and 9 cremation graves. The Celtic tombs were relatively far apart on the highest dune summit. As a result of the extraction of sand, an unspecified number of graves was destroyed. The examined part of the burial ground is to be dated to LT B2 and has its main time in the stage LT C1, i.e., in the second half of the 3rd to the first quarter of the 2nd century BC. And finally the cemetery at the site "Konkol" (pieskovisko) between the southern edge of the town and the local settlement Konkol (majer Konkoly), approx. 3 km directly southeast of the cemeteries at the Bacherov majer site, and about 4.5 km to the south of the burial ground at the Bohatá site. Because of the sand extraction on a large dune, which is crossed by a small road from Hurbanovo out to Chotín, a large part of the burial ground was destroyed. In 1961, the inventory of a warrior inhumation grave was saved (*Dušek 1961*). In 1964, a complete inventory of another warrior body grave (no. 18) was probably rescued. This contained a bronze Lekytos, height 12.4 cm. Based on the early variant of the belt of double-twisted links with large endrings, the tomb complex dates to the time of transition between LT B2 and C1, i.e., around the middle of the 3rd century BC. The presence of the Hellenistic bronze vessel in the tomb may be related to Celtic warriors who returned from a raid to Greece after

the year 280 BC. In 1968, the IA SAS carried out a rescue excavation on an area of approximately 600 m² under the direction of E. Rejholec. Eight Celtic graves were excavated and the incomplete inventory was rescued from seven other graves. Among them were two warrior tombs with swords (unpublished; *Benadik 1981; Benadik et al. 1957; Bouzek 2002; Bujna 2007; Dušek 1961; Rejholcová 1977*).

Kamenín (KAM), distr. Štúrovo

This site was probably part of a bigger cemetery on the right side of the river Hron. In 1939, Alexander Dudich (a teacher at the Hungarian school) started excavations at this site. All in all, 20 graves were observed, 18 inhumations and 2 cremation burials. All skeletons exhibited a south-north orientation, but that in grave 8, where the head was lying in the north. The cremation burials were placed in circular pits, and grave 15 was covered with stones. Part of the material was destroyed during the Second World War (*Benadik et al. 1957; Hunyady 1942*).

Malé Kosihy (MK), distr. Nové Zámky

This is a La Tène biritual cemetery northwest of the village on a low terrace 20–30 m above the river Ipel', about 20 km north of its confluence with the Danube. Within the dense network of Celtic cemeteries in the lower Ipel' region, it is between the cemeteries Ipel'ské Predmostie and Ipel'ský Sokolec in the north and Szob and Kosd in the south. During a rescue excavation carried out in 1985–86 by the IA SAS on an area of 6,700 m² (directed by J. Bujna) 105 La Tène objects were discovered – namely, 102 graves, the remains of a larger tomb, and probably traces of a fire pit (ustrinum?). M. Hanuliak also discovered 434 graves from the 10th–11th centuries. Before the rescue excavations started, a few tombs were destroyed, so that the total number of tombs on the cemetery probably did not exceed more than 110. Among the 102 Celtic tombs were 36 inhumation graves, the others revealed the fire rite. In twenty grave pits traces of internal wooden constructions were found. Some of the rich cremations were placed in rectangular grave pits with a step in the lower part, which contained a grave box made of wooden boards. The cremation graves exhibit two types: the Ustrina burial, where the place of fire is separated from the place of burial, and the funeral grave (bustum), where the place of fire is identical with the burial place. Concerning the location of objects of personal equipment there is a difference between burials with weapons and without weapons noticeable in the category of Ustrina graves with wooden construction. The items of personal warrior equipment – weapons, costume components, and jewellery – were placed undamaged in the grave, separately from the bones. In the unarmed tombs, undamaged, but also exposed to fire heat or deliberately damaged items of personal equipment were buried together with the bones. The cremation graves of the category of pyre graves are very rare. In cremation grave 62, with clear cremation marks from the fire at the bottom of the grave pit and burned board remains, an S-shaped deformed sword lay in an iron scabbard. This equipment occurred in eight cremation graves. From the undamaged warrior graves 149 and 176, in addition to a complete set of equipment (sword, lance, shield, and a set of daily necessities), also found were scissors, a small knife/razor blade, a grindstone, and also a set of kitchen utensils – a spit, probably for roasting meat or serving it. Both tombs with square surroundings – cremation burial 31 with panoply and cremation burial 452 with female attributes – were apparently ritually reopened and the inventory intentionally deformed. The iron scabbard from warrior grave 31 was probably used secondarily. On the inside there is a laminar punchmark decoration and on the back it was decorated with pairs of thin plastic ribs. Among the inventory fragments, a rare type of iron belt ('chain-in-chain') was identified by X-ray. Furthermore, fragments of the rim of a shield and a decorative button as well as fragments of a plastically decorated sheet, possibly of a helmet were found. In the early burial period, the rich women's graves are always inhumation burials, while warrior burials are in the cremation rite. The cemetery starts from the turn of LT B1 to LT B2, i.e., from the last quarter of the 4th BC until the end of LT C1, i.e., in the first quarter of the 2nd century BC (*Bujna 1995a; 1995b; 1998*).

Maňa (MAN), distr. Nové Zámky

A biritual La Tène cemetery discovered on the northeastern edge of the village Veľká Maňa on a slight loess height about 400 m from the river Žitava. The cemetery is located within a dense network of Celtic burial grounds along the upper part of the Žitava-Lúčnica nad Žitavou, Žitavce, Michal nad

Žitavou, Trávnica, and Úľany nad Žitavou. During clay mining several graves were destroyed. In 1937 two inhumation grave inventories were rescued, one of which was equipment. The inventory is deposited together with finds from other destroyed graves in the Slovak National Museum in Bratislava and other finds in the Slovak National Museum in Martin. During rescue excavations in 1952–55 (by IA SAS, head B. Benadik) 109 Celtic graves were excavated on an area of about 10.000 m², as well as six inhumation graves (1, 2, 5, 22, 34, 49) of the Mezöcsát group from the end of the Bronze Age and two cremation tombs (12 and 17) of the Vekerzug group of the late Hallstatt period, i.e., the end of the 6th to 5th century BC., along with 23 early medieval graves. On the total 109 Celtic tombs, 91 were inhumations, the others cremations. Wood was found in nine burial pits, indicating a construction of wooden boards. In the cemetery, three double graves were found, in one case the superposition of a double grave and another grave. Among the twenty tomb complexes with weapons (about a fifth of all inhumation graves), eight tombs revealed a two-piece shield buckle and two others a one-piece band-shaped type appeared. In three cases it was possible to reconstruct the shape and dimensions from the edge of the shield, which had been preserved in its original condition. These are shields with double buckles, either in oval form with the dimensions 110 x 140 cm and 70 x 135 cm or in the form of an elongated lens measuring 60 x 170 cm. In the early burial phase, which is still to be synchronized with the Vordux horizon, i.e., LT B1, the women's costumes are characterized by either paired ring jewellery as arm or foot rings, as undecorated bronze rings with stamp-shaped ends, or as a combination of a knotted bracelet with stamp-shaped ends on the left and a fine braided silver wire bracelets on the right wrist. The ring jewellery is completed by a neck ring/necklace with stamp-shaped ends. The women's costume is further characterized by fibulae in pairs – each on one shoulder, of early La Tène construction. They were either bronze with a bow-shaped arch, or early bronze fibula types with disc-shaped foot decoration (so-called Münsinger fibulae), or small iron fibulae with a spherical foot and beak-like ends and the younger type of two-piece belt hook whose hook reached over the box-shaped application. In the late phase of LT B1, i.e., LT B1c we can see bronze anklets of densely cross-ribbed decoration and stamp-shaped ends and necklaces of thin twisted bronze wire, in combination with early types of bronze and iron brooches of early La Tène construction with spherical foot decoration and arches of thin cross-section. As a bracelet we can see the early type of bronze ring with a larger number of massive nodes with stamp-shaped ends on the left wrist. On the right wrist there is a bronze braided-wire bracelet. Two-piece belt hooks are replaced by one-piece belt hooks with hook and box-shaped application. In LT B2, necklaces are replaced by fine bronze chains with amber rings as pendants, and the metal chain belt appears. As an early type, a chain of circular iron ornaments appears, which are particularly numerous in Maňa. The early phase (LT B2a) is characterized by the appearance of the early type of bronze sheet rings, transversely ribbed and decorated with triplets of simple profiled warts. Its younger variant, featuring triplets of twofold-profiled warts, later became the most common type of anklets until the beginning of LT C1. Together with it appeared bronze brooches from the early La Tène construction with drum-shaped bows and iron fibulae of thin cross-section with ball-shaped foot-decoration, which are clipped to the arch. In the more developed phase (LT B2b) we can see bronze rings with plastic decoration in the form of eyelets with zigzag lines and, as new forms, the early type of bronze casting called *Nussring*, then used as a bracelet. In the later phase (LT B2c) the early type of the *Nussring* (6 + 6 or 5 + 6 buckles) prevails as a function of anklets, and the long iron fibula with foot occurs. This foot is either divided by a ball or profiled several times and fastened in the first third of the asymmetrically curved arch with a clamp. At the transition from LT B2 to LT C1, the younger type of *Nussring* starts to assert itself in the function of anklets (4 + 4 buckles).

In LT C1, the short bronze chain is replaced by a long chain that is probably hung several times around the neck. The amber ring pendant, whose weight increases, is combined with glass beads. The belts of ring chains or long multiply twisted links are replaced by chains of short double twisted links. In the function of anklets occur only *Nussringe*. The early phase of LT C1a shows small iron fibulae with foot in the form of a triangle attached with a clamp in the first half of the length of the arch, and long iron fibulae with an elongated, small knot at the foot. In the younger phase – LT C1b – bronze four- or three-buckle rings appear as anklets, combined with long-footed iron brooches with a disk for a decorative glass insert; the other disk is placed at the connection of the foot with the arch and outer chord. In Maňa no clear fibula type by the middle La Tène construction (with two balls) is represented. The youngest horizon of burial activity at the end of LT C1 represents, for example, the female grave 133 with rich inventory. This includes two glass arm rings, glass beads, a large coil-shaped pearl, a fibula with impasto inlets on the arch, and a perforated fitting with a belt with pseudo-filigree decoration. The entire period

of the La Tène Flachgräber horizon in southwestern Slovakia is represented at the cemetery in Maňa, from LT B1 to the end of LT C1, i.e., from the second quarter of the 4th century until the first quarter of the 2nd century BC (Benadik 1978; 1983; Gebhard 1989; Romsauer 1999).

Palárikovo I (PAL I), distr. Nové Zámky

The first object is a biritual cemetery called location I at the northwestern outskirts of the village in the former village of Dolné Križovany (earlier still, Dolný Keresztúr), on a sand dune slightly above the floodplain of the Váh river. Because of the sand extraction in 1968, graves were damaged. Finds from only three inhumation graves were saved. The AI SAS carried out the excavations in 1970–1973 under the leadership of B. Benadik. On an area of more than 8,000 m², 94 LT graves were uncovered as well as a grave pit without inventory. Settlement pits from both the Roman period and from the 13th century AD were also found. Even before the excavations, the south and northwestern edges of the cemetery had been partially destroyed. Of the total of 94 graves, only seven were cremations. In five cases, there are double graves, of which two are a combination of the inhumation and cremation rituals. Only eight graves were equipped with weapons. The inhumation tomb of a warrior (84) and a woman's inhumation tomb with rich equipment (86) were of the same orientation, placed close to each other, and surrounded by a square-shaped trench, where inside an asymmetrically located grave pit without inventory was uncovered. Another inhumation burial of a warrior (44) and a double grave (46) with the burial of a warrior and cremation remains in an urn were surrounded by circular trenches. The third, with a circular surrounding is a child's grave (75) with rich equipment including gold and silver wire ring and a vessel made of clay in the form of a shoe. From another child's grave comes a silver coin. Based on the rich grave equipment, the tomb can be placed into the developed phase of LT C1, i.e., around the year 200 BC. In the necropolis of Palárikovo, people were buried during the whole period of the 'Celtic flat cemeteries' in the territory of southwestern Slovakia, from LT B1 to the end of LT C1, i.e., from the second quarter of the 4th to the first quarter of the 2nd century BC (Benadik 1975a; 1975b; 1984; Gardelková-Vrtelová 2017; Polenz 1982).

Palárikovo II (PAL II), distr. Nové Zámky

At the "Kopcová remíza" site, about 2.5 km northwest of the cemetery in location I, in 1973 J. Paulík of the Archaeological Museum SNM Bratislava, excavated three La Tène inhumation graves and one cremation grave and a pit with La Tène pottery and small pieces of human and animal bones on a slightly elevated dune. Since no further La Tène period graves were found near the mound, the excavated tombs may represent an independent group related to the stony pit in the center of the mound, which is considered a cult object. However, this finding may also indicate that only the edge of a larger burial ground has been determined. In tomb 1, a female skeleton with a newborn child was found, in tomb 5 a child. In tomb 2 appears a partly damaged skeleton with equipment suitable for the women's costume of the beginning of LT C1, which is – multiple buckle foot rings, a multiple buckle bracelet and a simple bronze ring as armrings, a bracelet of lignite and iron on the left upper arm and an iron chain belt made of double twisted links as well as a larger amount of fibulas. A special addition to the funerary inventory is an iron rod-shaped, short-barreled, 82 cm long rod parallel to the left arm. This tool is similar to the forge spoons which are known from the Late La Tène settlement inventory also from the territory of Slovakia. Because of the occurrence of this iron object, which was interpreted as a sceptre and the uncertain anthropological sex determination, it has long been suspected that a male druid was buried in the grave. According to the funerary equipment, the tombs belong to the beginning of LT C1 (Bujna 2012b; Paulík/Zachar 1975).

Svätý Peter (SVP), distr. Hurbanovo

During the exploration of a bronze age cemetery in 1959, next to the village of Komárno, six (6) La Tène graves came to light. The cemetery was located on sandy terrain next to the agriculture cooperative of Sv. Peter. All skeletons were laid out in a stretched position, the grave shafts were either strictly rectangular or rectangular with rounded edges. The orientation of the burials was N–S (no. 55, 59, and 63), SE–NW (no. 34, 62) and NW–SE (no. 58). Only burial no. 62 was weapon equipped, grave no.

58 had many fibulae. Remarkable is the pot sign (makers mark) at the bottom of a pot from grave 34. All in all, the cemetery can be dated into the subperiod from La Tène B to the beginning of La Tène C (Dušek 1960; Ramszl 2014a).

Trnovec nad Váhom – Horný Jatov (TNV – HJ), distr. Šaľa

Two La Tène cemeteries in the communities Trnovec nad Váhom and Horný Jatov. The first is the biritual LT cemetery on the eastern terrace of the river Váh. In 1942, a part of a sand dune, on which a burial ground was located, was destroyed because of road construction. Some finds from the destroyed graves are deposited in the MNM Budapest. In 1951–54, the Archaeological Institute in Nitra, under the direction of A. Točík, carried out excavations that yielded a cemetery from the period of the Avar Khaganate; at the same time, they excavated 40 (?) La Tène burials, including 27 inhumation graves, 10 cremation graves, and 3 of unidentified rites. Two inhumation tombs – a richly equipped female grave (233) and a warrior grave (362) – were surrounded by square-shaped trenches measuring 10–11 m in size. The cremation graves included pit and urn burials. Weapons were found in five graves. From the destroyed grave 165 comes a rare find in the territory of Slovakia of a special pottery vessel – namely, two high vase-like foot vessels with lids, which can be found usually in the western La Tène milieux. Originally, it was probably an extensive cemetery, as we may surmise on the basis of grave inventories during the entire period of existence of Celtic lowland settlements, from LT B1 to the end of LT C1, i.e., from the second quarter of the 4th century until the first quarter of the 2nd century BC.

The second cemetery is about 4 km north. In 1934, K. Kriegel excavated several La Tène tombs; the grave goods from one of them was deposited at the Archaeological Museum of the Slovak National Museum in Bratislava and have yet to be analyzed (Benadik *et al.* 1957; Eisner 1939).

Special cases

Among the La Tène cemeteries of western Slovakia, according to the present data, the following special cases can be mentioned:

1. Men with anklets

From this unconventional combination, we have two examples in the cemetery of Chotín (Görföl 2017; Ratimorská 1981; Tóth 2015). The first case is grave 10, a male (see Tóth 2015, Table 1) skeleton with anklets with four big hollow buckles, a bronze chain at the shoulder area and an iron ring (bracelet?) over the head (see Görföl 2017, 90).

The second case from grave 12 is a very special one. A man (20–30 years; Tóth 2015, Table 1) is equipped with a bronze fibula at each shoulder, an iron fibula at the left side of the pelvis, an iron upper arming at the left side, as well as bronze anklets with four big hollow buckles and ceramic vessel at the right side. As written in the chapter by J. Gretzinger and S. Schiffels in this book, it is clear by analyzing the DNA that this is a biological man.

2. Woman with weapons

In Slovakia, until recently we had two cases of women with weapons, but one (Dubník, grave 24) was eliminated by DNA analysis. However, in the other case, Chotín 30, it was not possible to get clear results by this method. After A. Tóth (Tóth 2015, Table 1) it is a woman of 20–22 years, equipped with an iron sword in a scabbard, a sword chain (Panzerkette type), an iron lance with shoe, two iron fibulae, an upper arm ring at the left side, as well as 3 ceramic items and animal bones. The grave goods date into LT C.

3. Men with necklaces

In our research area, we have three such cases. The first is grave 91 in Maňa (Benadik 1983, 44, 45, Fig. 8; Pl. XXXII), a 16–20 year-old individual (probably male), with an iron (double twisted) necklace, a double (twisted?) bracelet, two iron and one bronze fibulae, and (as part of defence weapons) iron shield rims. Among other grave goods were two ceramic items and animal bones. Remarkable is the double twisted necklace, which is unique in La Tène graves in our area. In addition, we need mention the saddle-shaped silver fingering and a bronze one at the right hand (Benadik 1983, Pl. XXXII). Also

remarkable is the (usually typical for female burials) symmetric location of the fibulae costume (an iron fibula on each shoulder and a bronze one in the middle).

The next examples are from the cemetery of Palárikovo: at first grave 69A, the burial of a 35 year-old man (Jakab, internal report), equipped with an iron necklace, an iron upper arm ring at the left side, and an iron fibula at the skull. Remarkable is the bronze fingering at the right hand and the silver fingering at the left hand. The other example is grave 84 (male, 30–35 years; Jakab, internal report), with a bronze necklace, an iron sword in a scabbard at the right side connected with a sword chain, a 2-part shield buckle, an iron lance tip, an iron fibula, and 4 ceramic items with animal bones. Again remarkable is the bronze finger ring at the left hand.

To summarize the situation: both individuals have necklaces and finger rings.

4. West–East orientation

La Tène period graves/burials with W–E orientation are very rare in Slovakia (according to our analysis). We can mention Trnovec nad Váhom no. 198, an indeterminate individual with only one ceramic sherd and one iron ring at the skull and grave goods. At the cemetery of Bajč, there are 3 graves with W–E orientation. Grave 5 contains a male individual (adult/mature) with two spear heads, an iron belt, small iron and bronze artefacts, and an iron bracelet at the left hand; grave 46 is a juvenile female with unusual arm and leg position and grave 54 an indeterminate juvenile person with only two ceramic items and an iron fibula at the right shoulder. Finally we can mention that these cases (most of the time) contain graves without or with but very poor grave goods and/or unusual body position. Only grave 5 from Bajč is equipped with weapons, a belt, a fibula, and a bracelet.

5. East–West

Also the E–W orientation of burials is not very often used in Slovakia, so we count only 3 examples. The first is Malé Kosihy no. 95, which contains a male person of about 30–40 years with a left iron upperarm ring and 2 ceramic items and animal bones. The position of the right arm is unusual. In grave 3 from Maňa lies an 8–12 year-old girl with iron fibulae on each shoulder, two bronze rings at the right leg, and 3 ceramic items with animal bones aside. The third case is grave 11 from Bučany, which consists of the burial of a 30–40 year-old woman, equipped with a bronze bracelet on each wrist (right and left), a bronze fibula at the breast, an iron belt hook, as well as two iron knives and 2 ceramics.

6. North–South

Before we talk about the exceptionality of a north-south orientation of La Tène burials in Slovakia, we should mention that the majority of them is orientated from southeast to southwest (as in northeast Austria).

It is remarkable that in some cemeteries in Slovakia, the rate of N–S oriented burials is very high, as in Trnovec nad Váhom (15), Maňa (8), Palárikovo (4), Bajč (4), Svätý Peter (4 of five), and Bučany (3), as well as in Kamenín and Hurbanovo-Bacherov majer with only one case.

A special case seems to be Svätý Peter with only five (5; for this analysis) usable burials, where 4 are N–S and one is S–N oriented. As there are no usable anthropological results, we have to use only the grave goods. Burial 34 (NNW–SSE) is equipped with an iron fibula, a knife, a pair of scissors, and 2 ceramic items; burial 55 (N–S) is equipped with bronze bracelets on each foot and one left side bracelet as well as one ceramic vessel. Next is burial 63 (N–S), with one iron fibula, a knife, and a pair of scissors as well as 3 ceramic vessels and animal bones. The fourth, grave 58 (NW–SE) is the most equipped one: bronze fibulae on each shoulder, a right hand bracelet and a left upper arming as well as bronze anklets. Appearing at the breast region were a lot of small bronze rings and small iron artefacts, and at the feet, as well (together with 2 ceramic vessels). Grave 62 (N–S) is the only one equipped with a lance tip and a shield boss.

A very interesting point is that at several cemeteries (Dubník, Bajč, and Bučany), but most at Malé Kosihy, many cremation burials in body sized grave shafts appear. It is nearly impossible to express a 'head' orientation (also, when there have been some attempts to direct examples like this of C. Eibner 1974). If we compare the position of grave goods of inhumation and cremation burials, we can see a lot (about 25) of N–S orientations at the scattered cremation burials at Malé Kosihy. How to deal with their orientation is a matter of serious discussion, and also the topic of a recent thesis (Styk 2019). To summarize: The majority of the La Tène graves are of SW to SE orientation. But in a small number of burials the head lay in the northern direction (mostly in the cemeteries of Svätý Peter, Trnovec nad Váhom, Maňa, and Palárikovo).

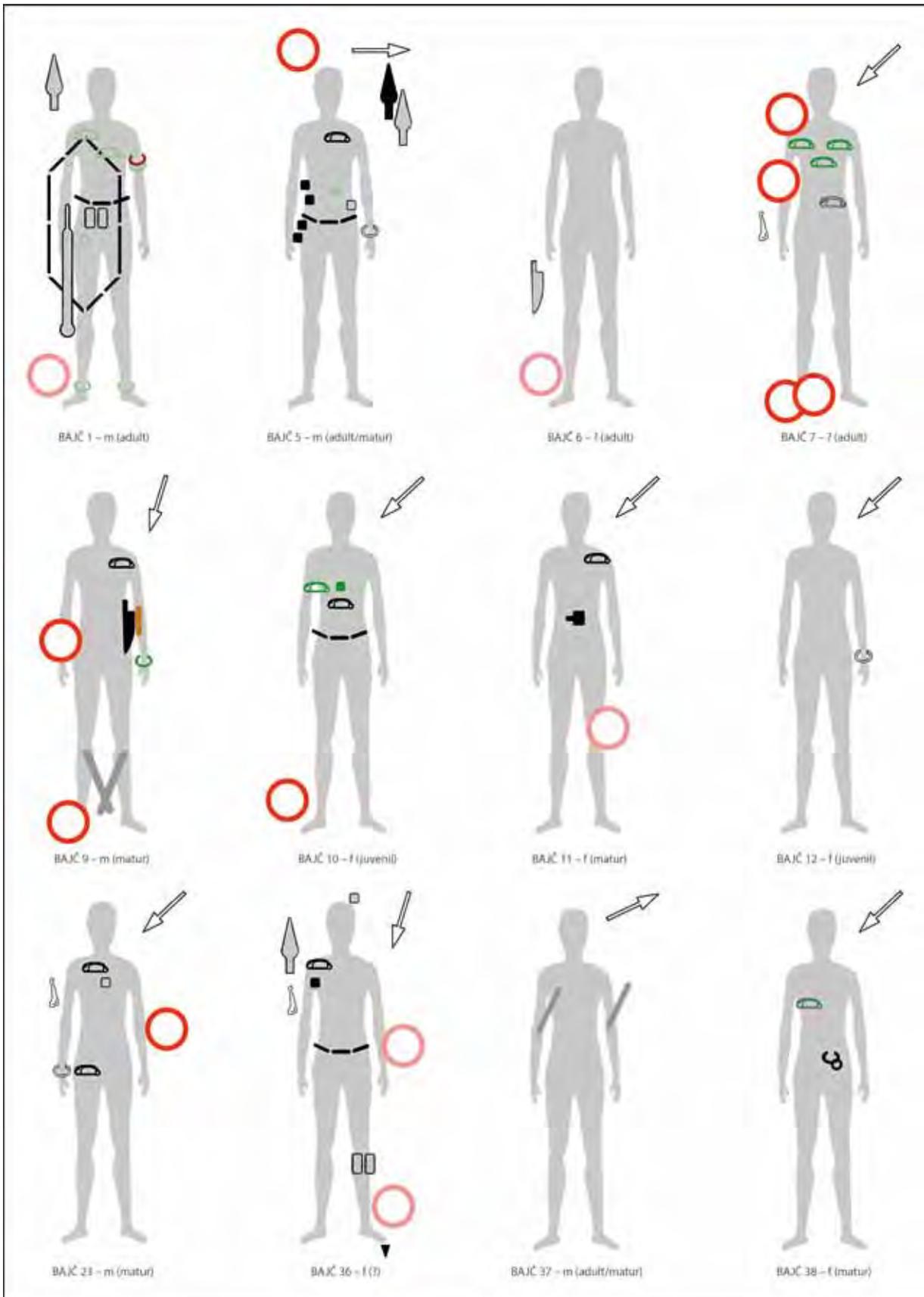


Fig. 10. Schematic graphics of the burials in Slovakia.

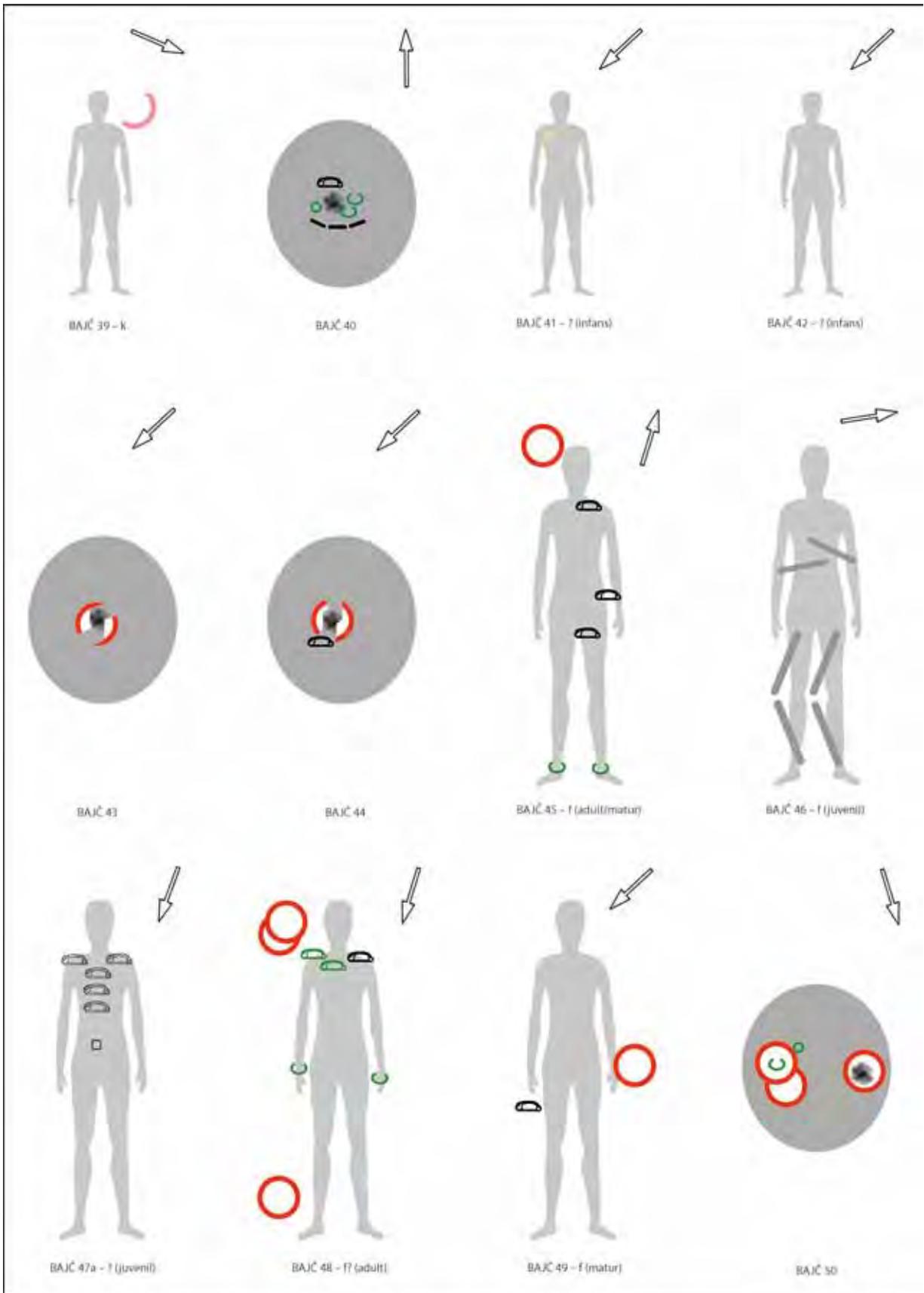


Fig. 10. Continuation.

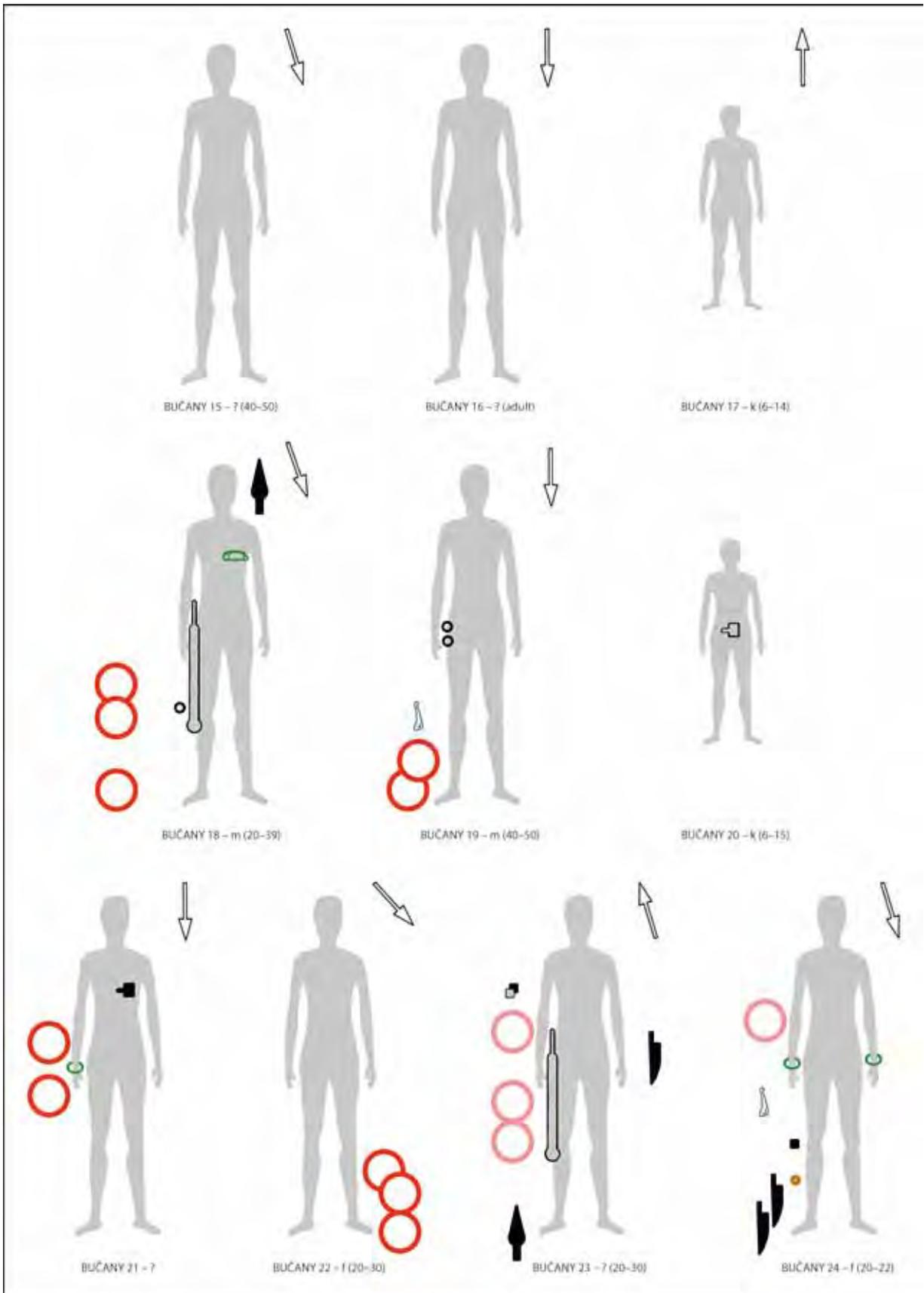


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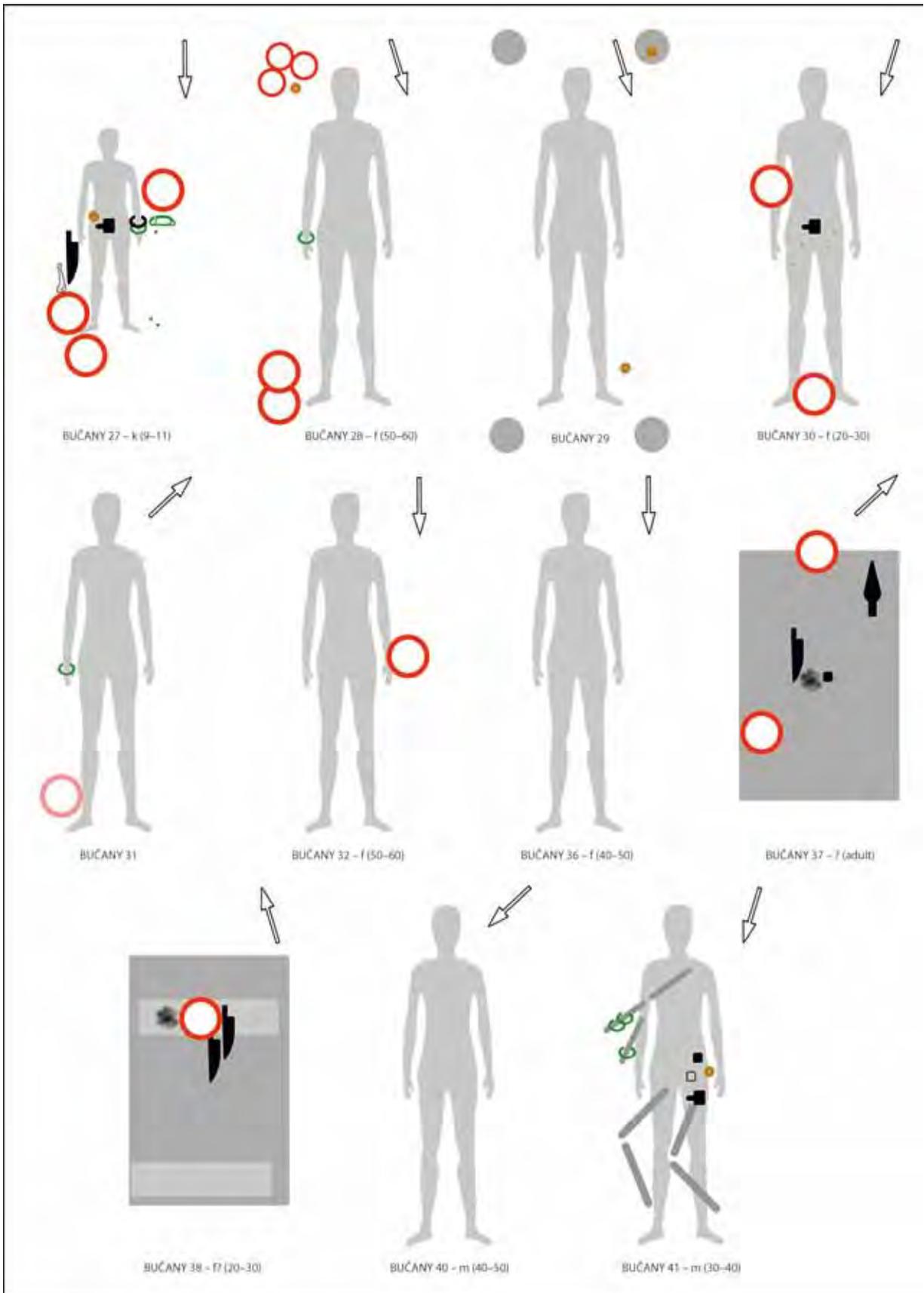


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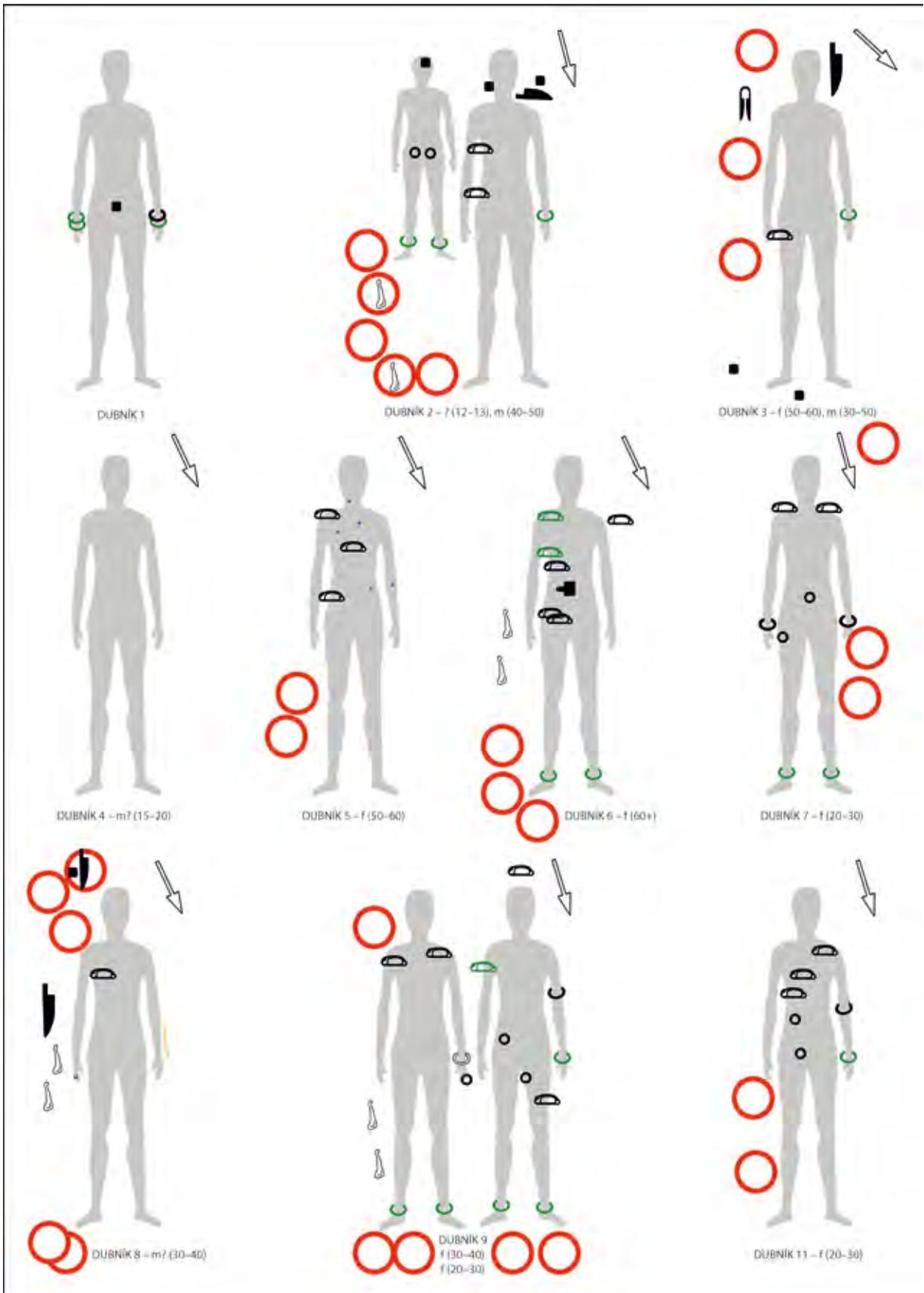


Fig. 10. Continuation (Dubník 3 – skeletal remains of the second individual were present in the grave).

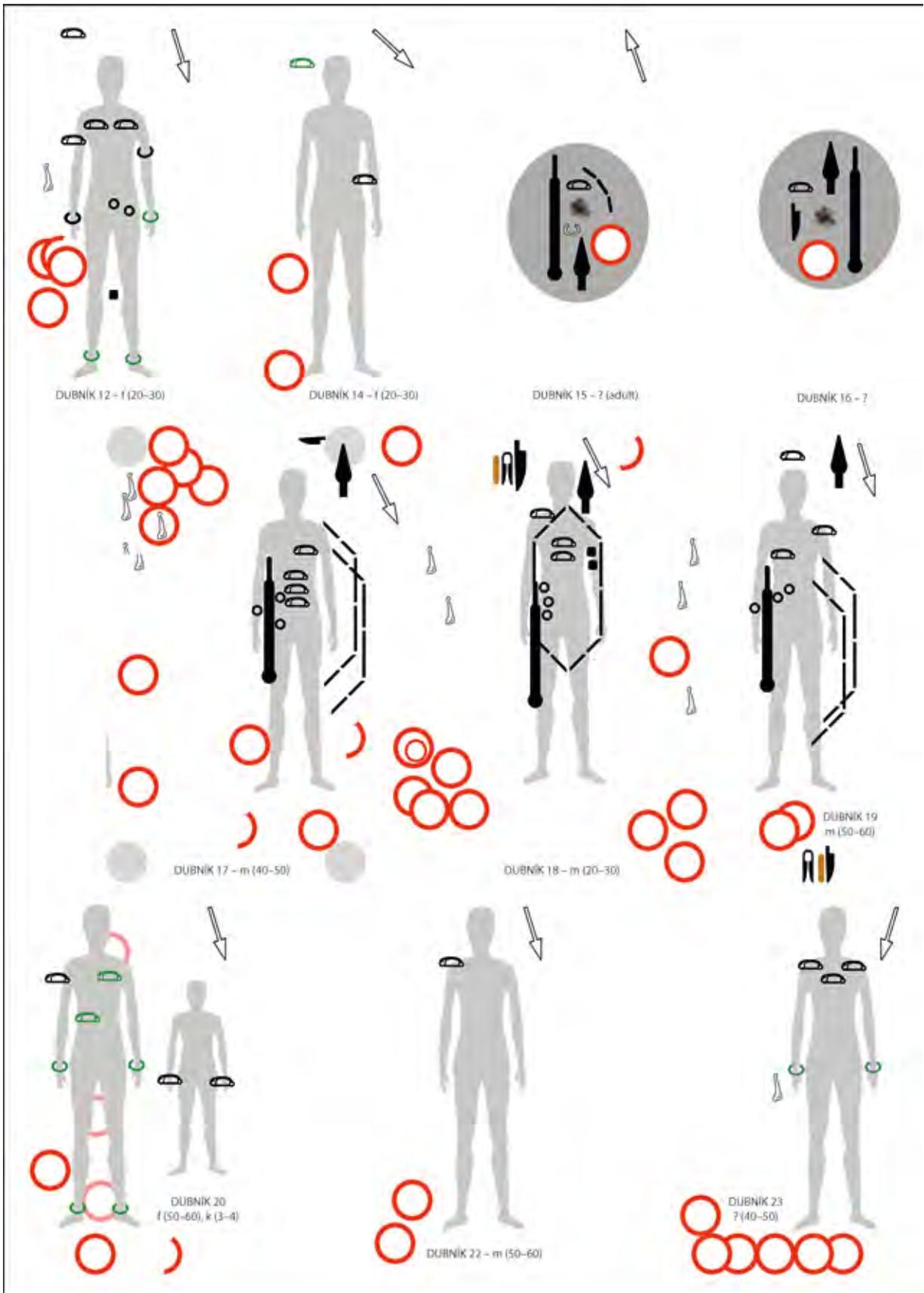


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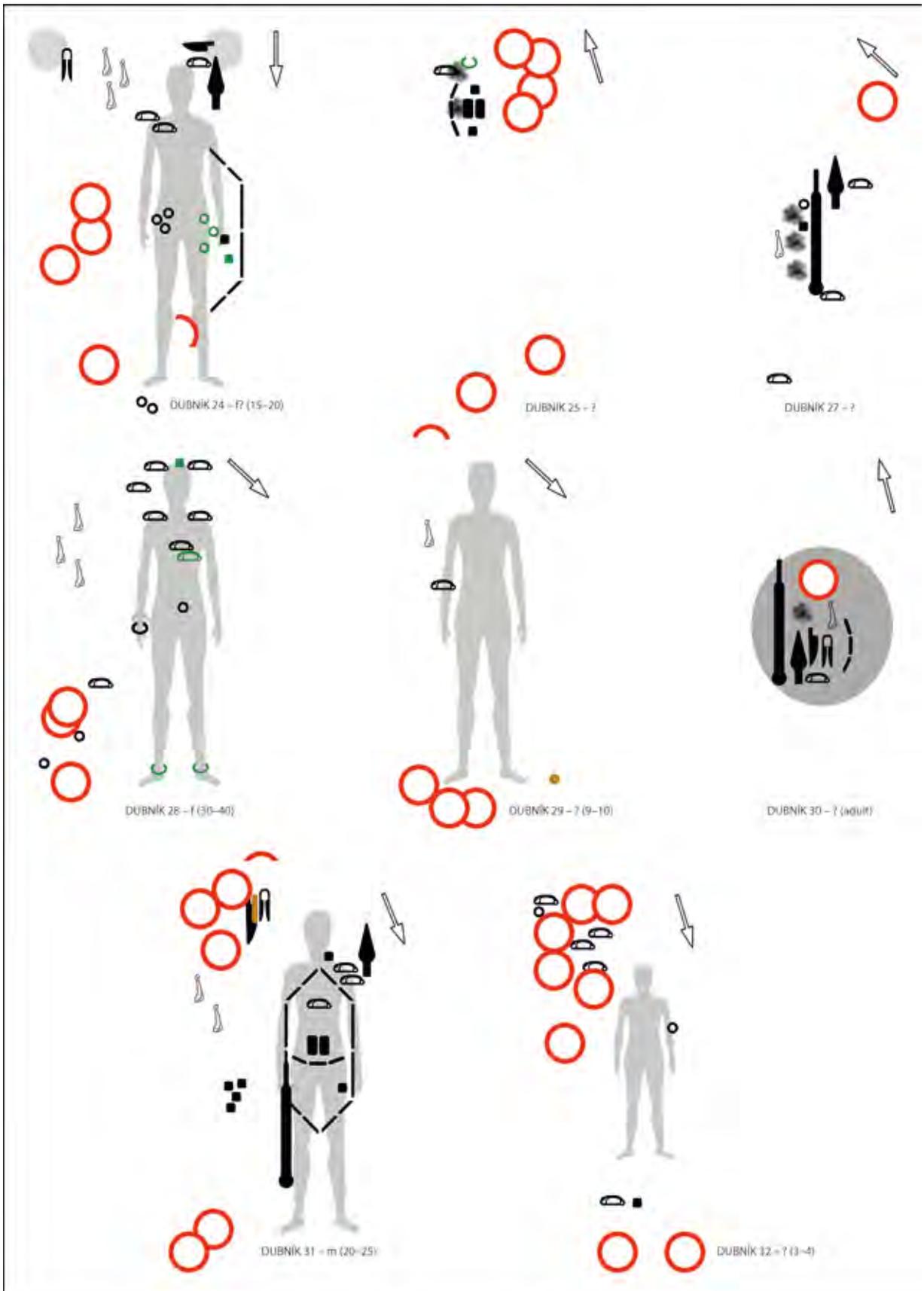


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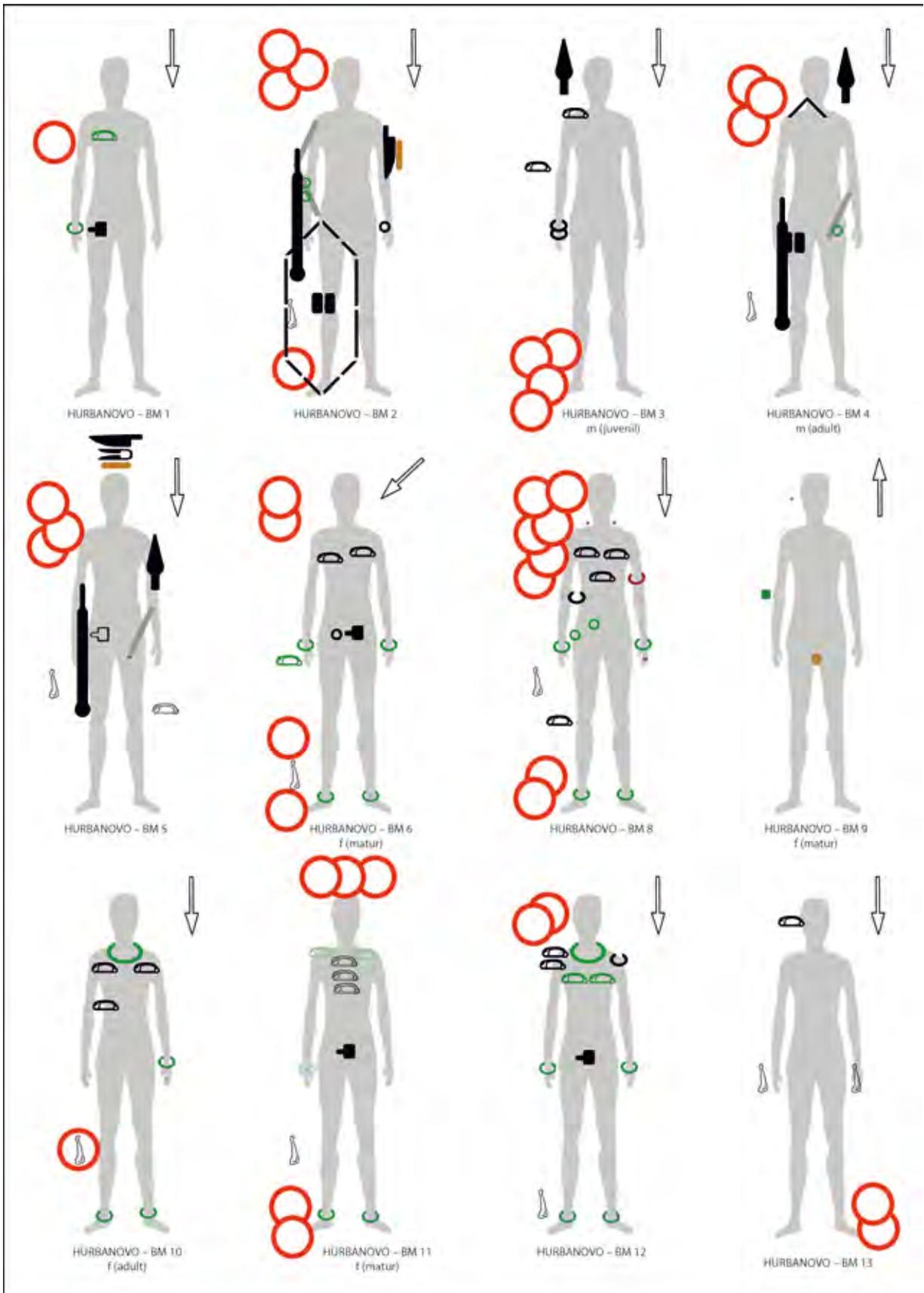


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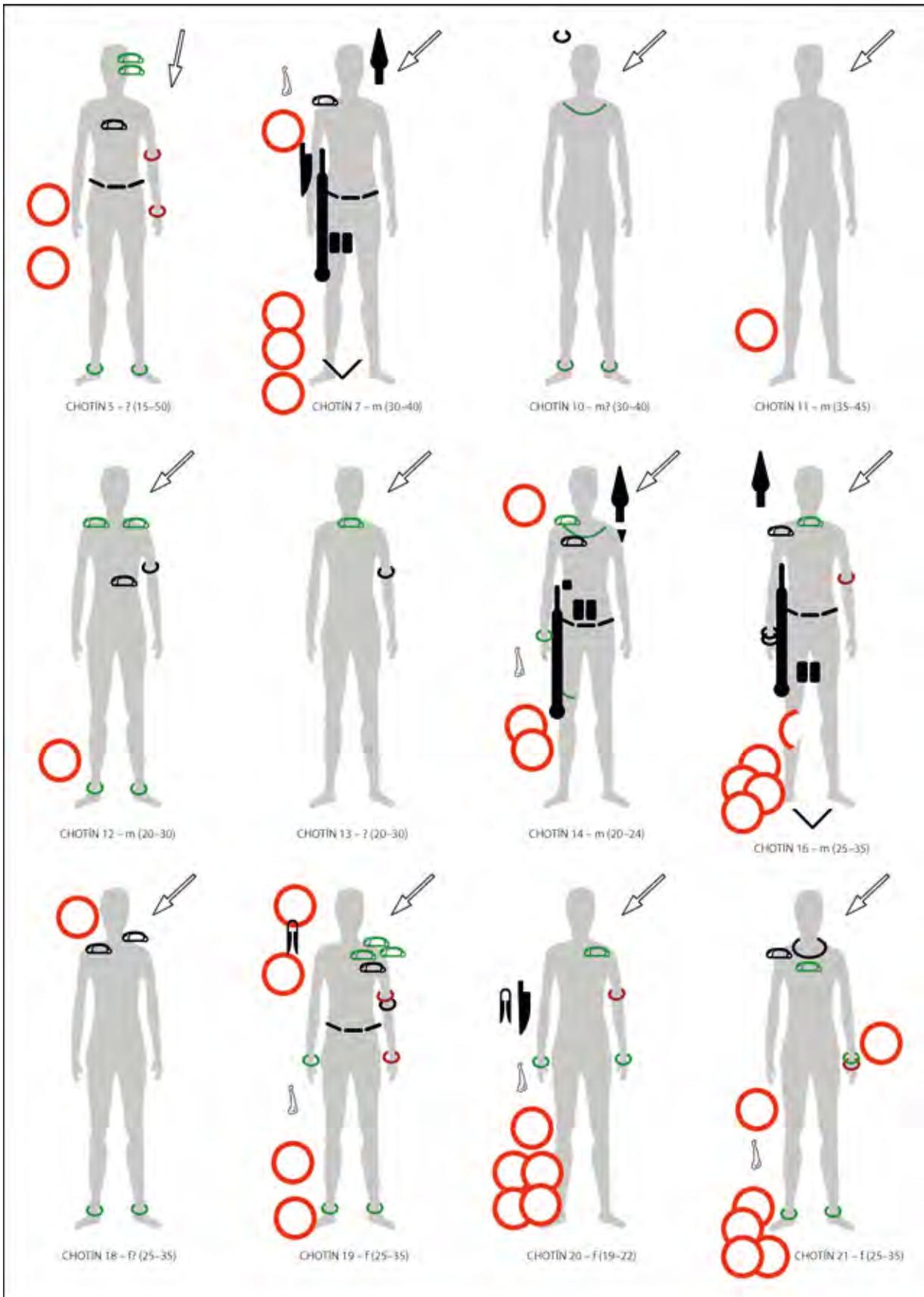


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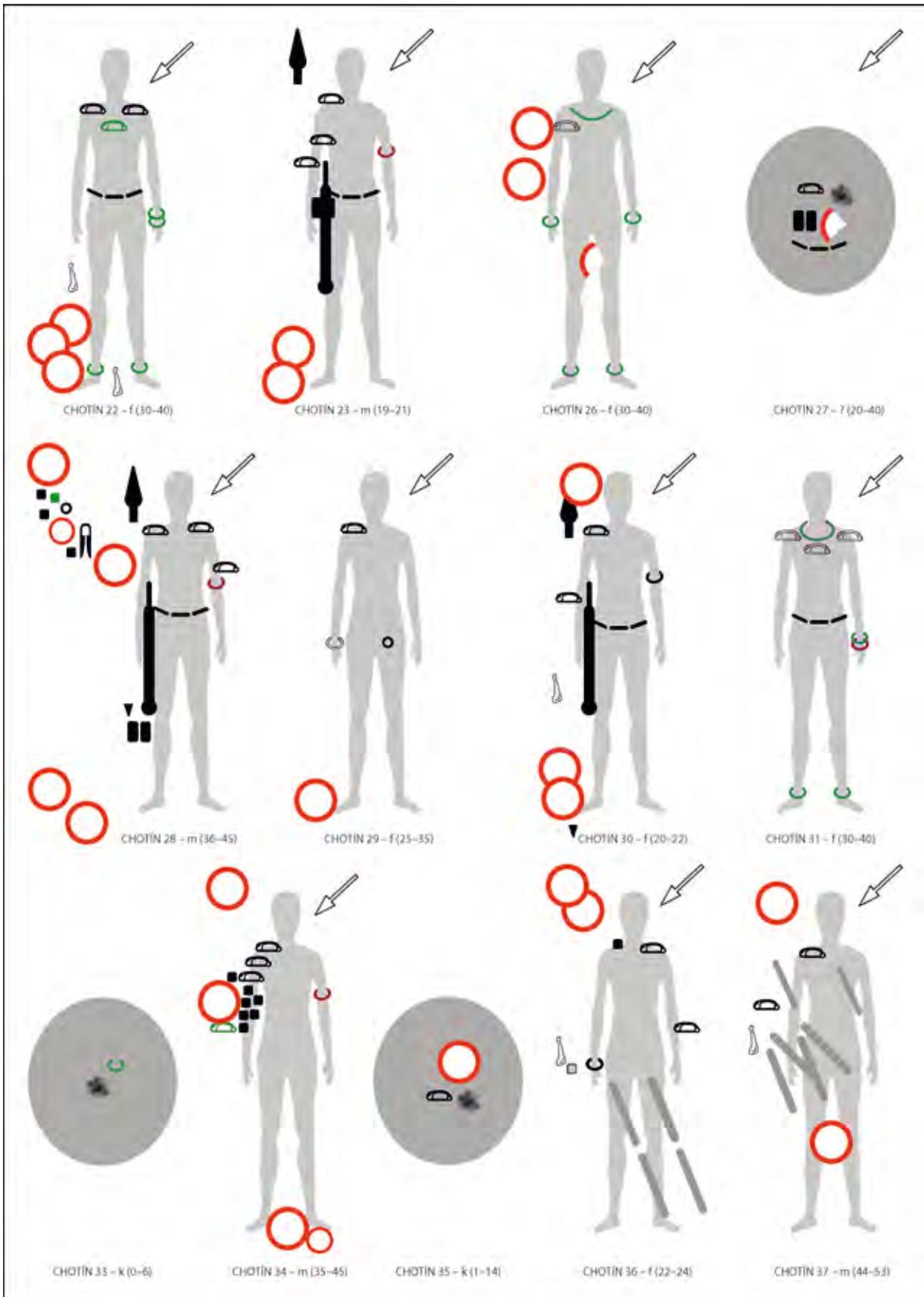


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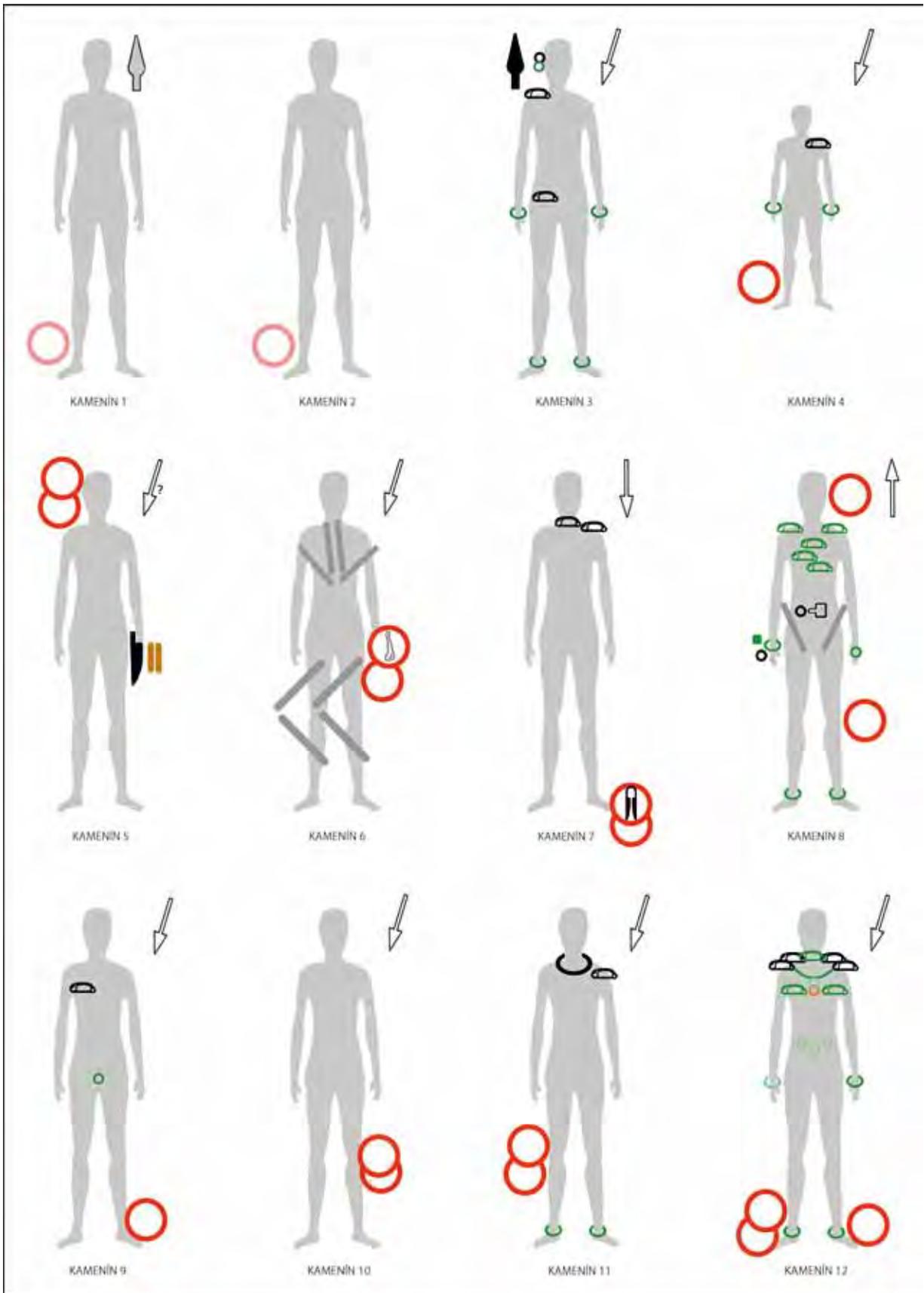


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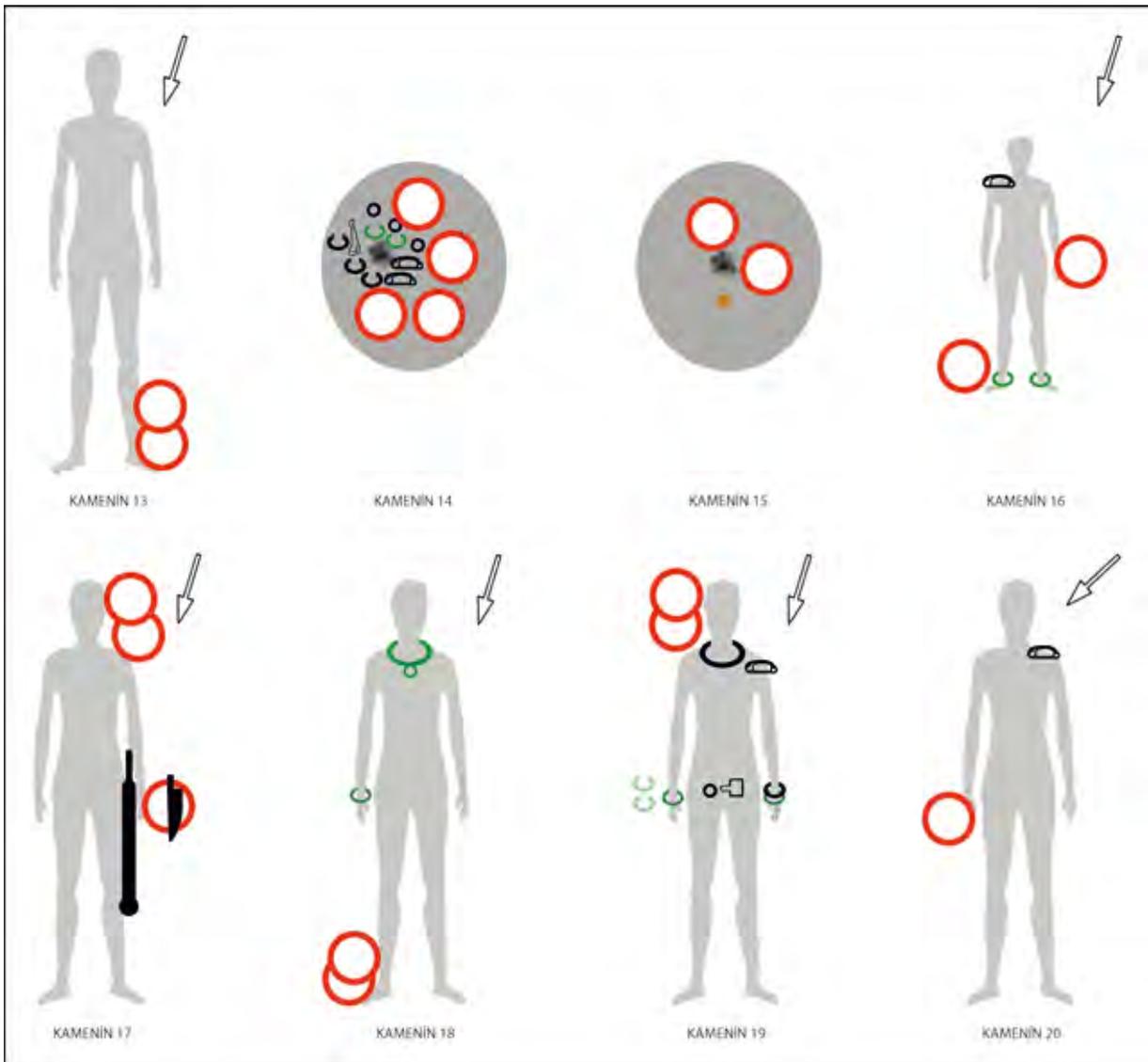


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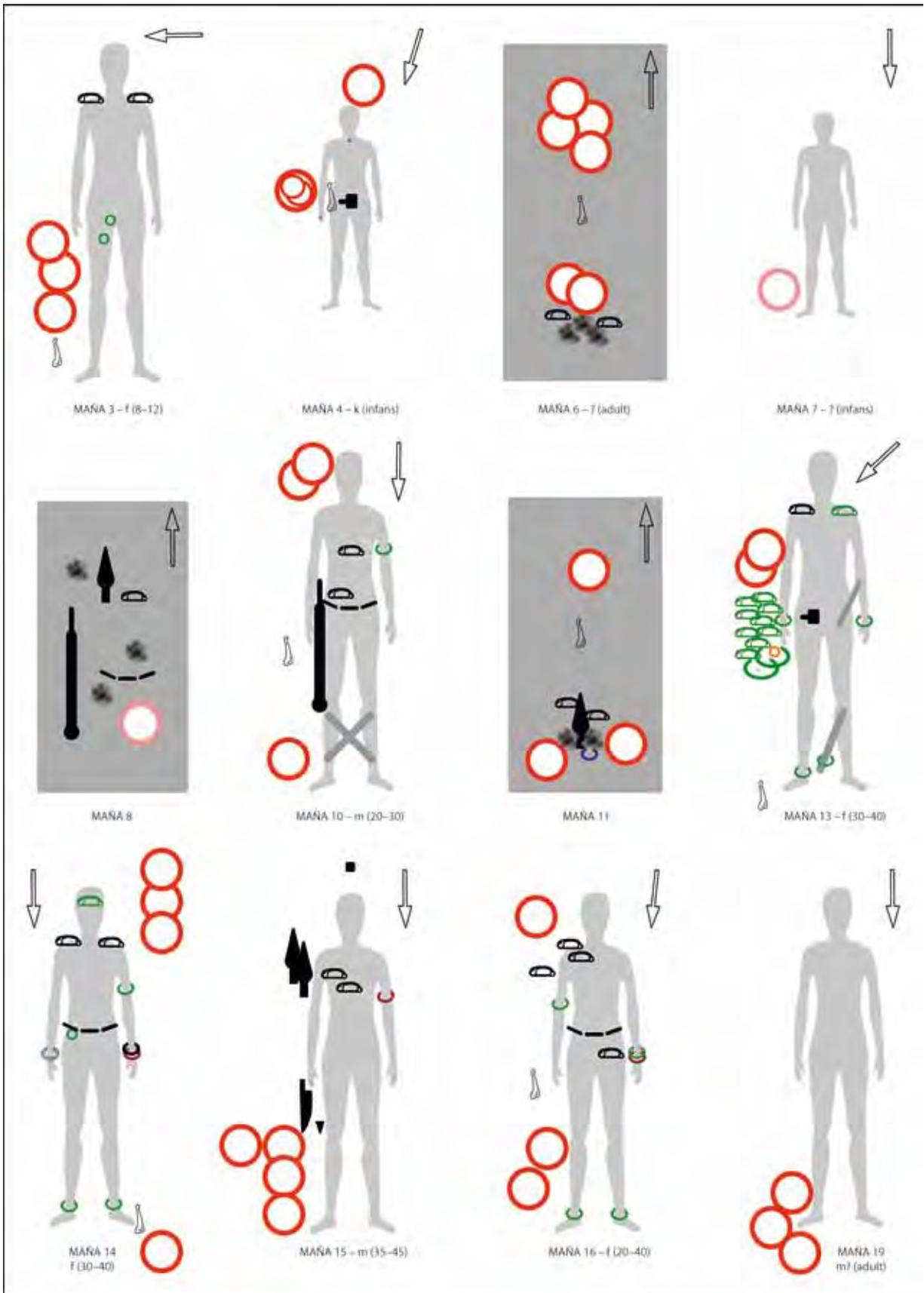


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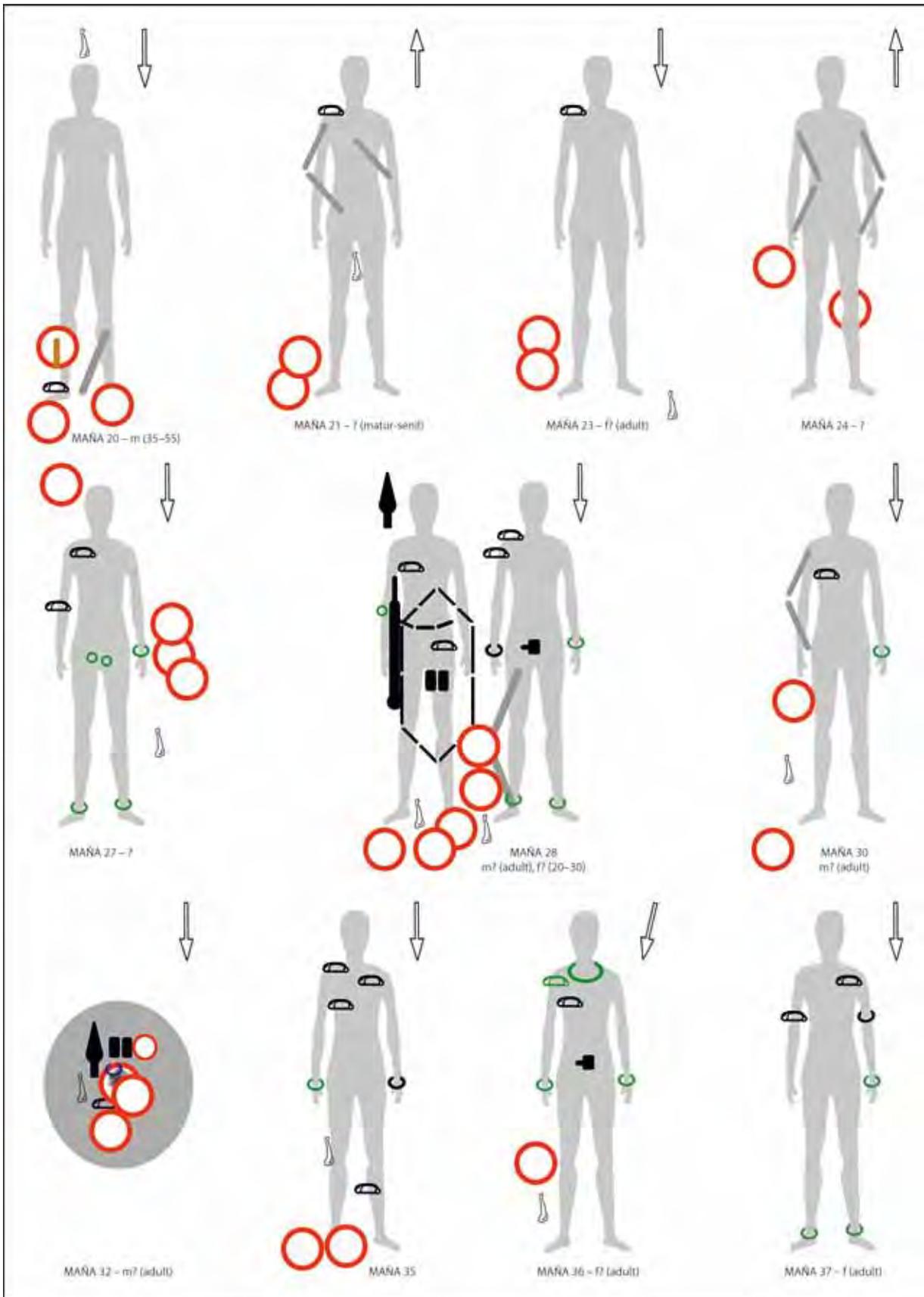


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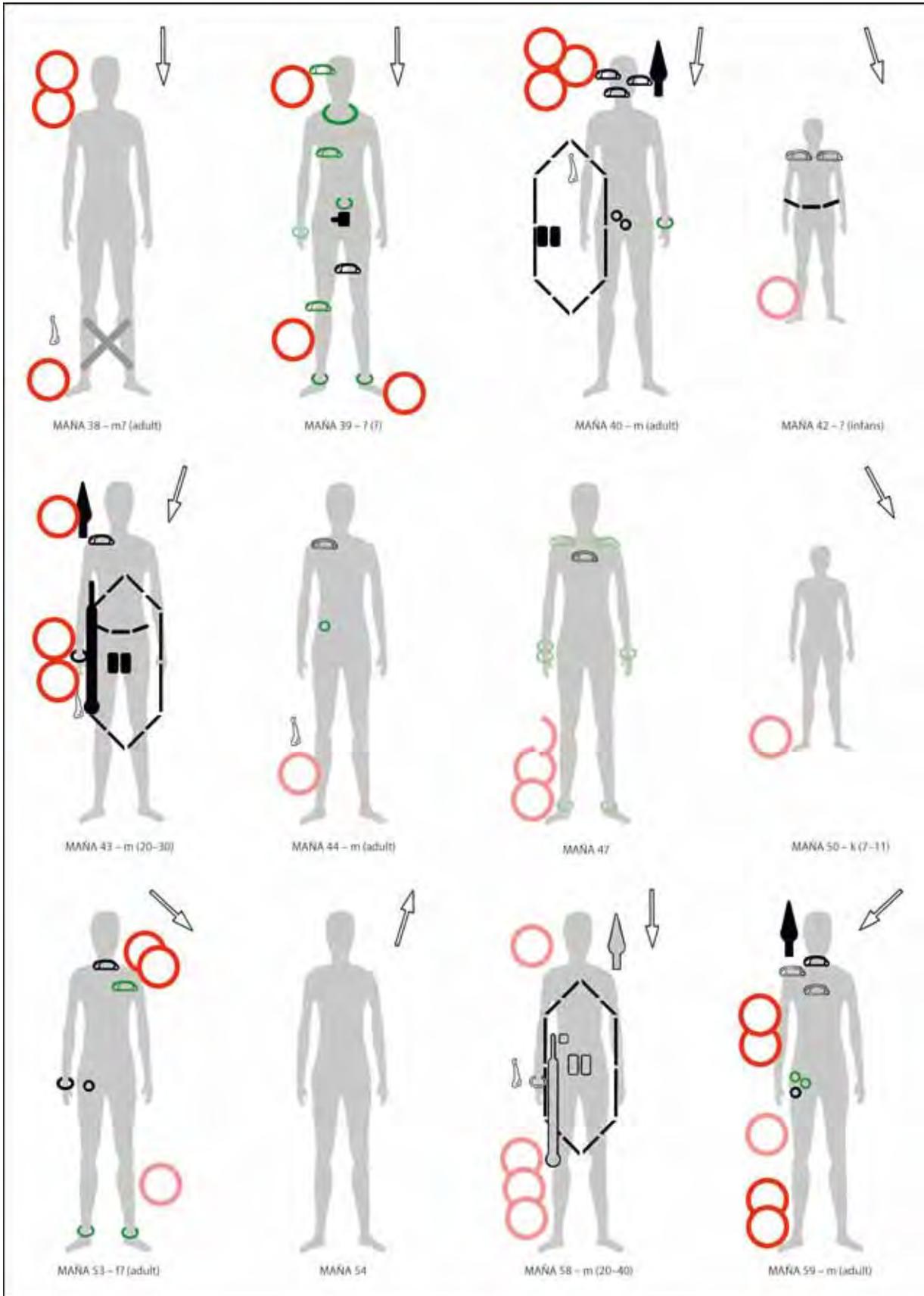


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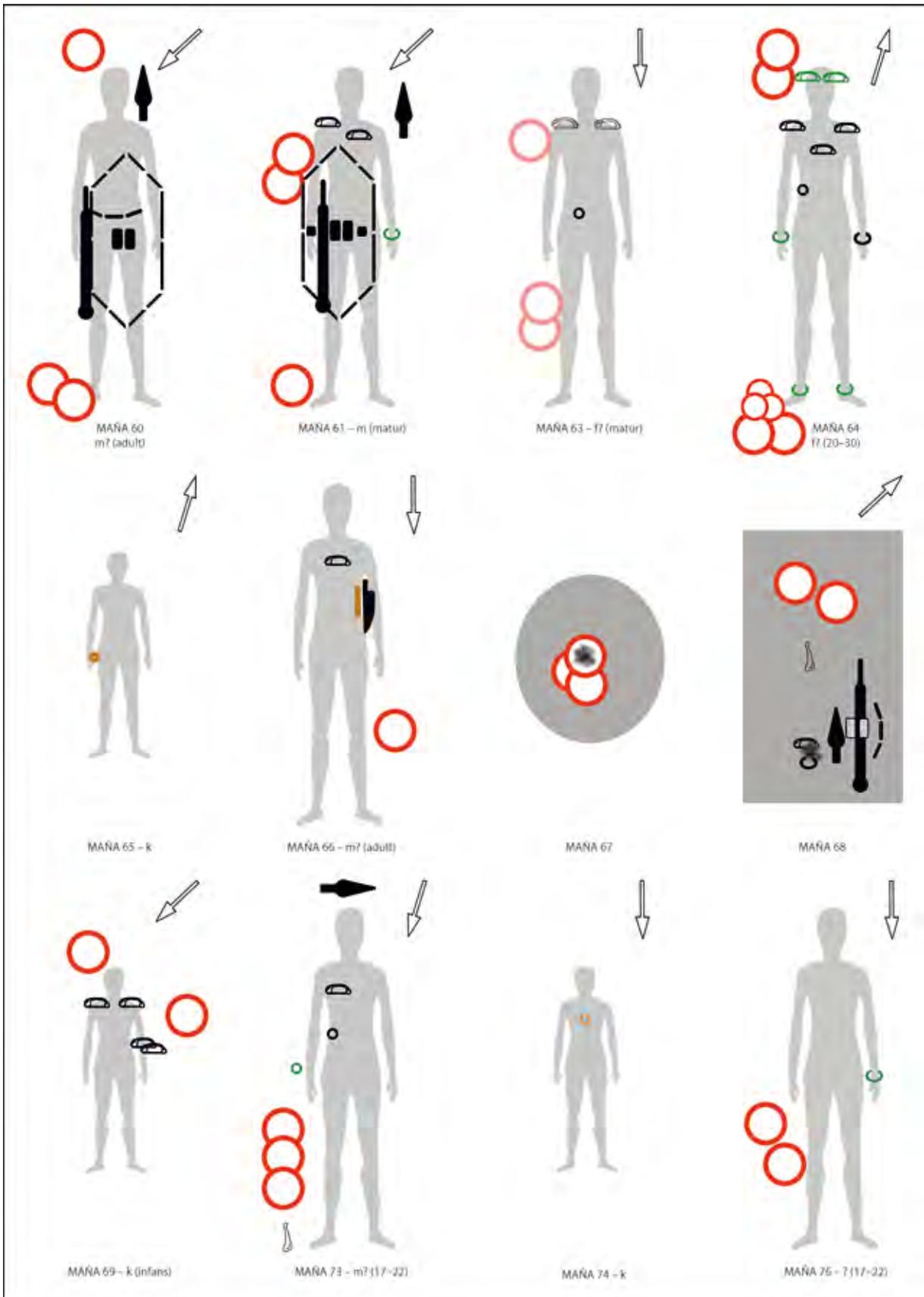


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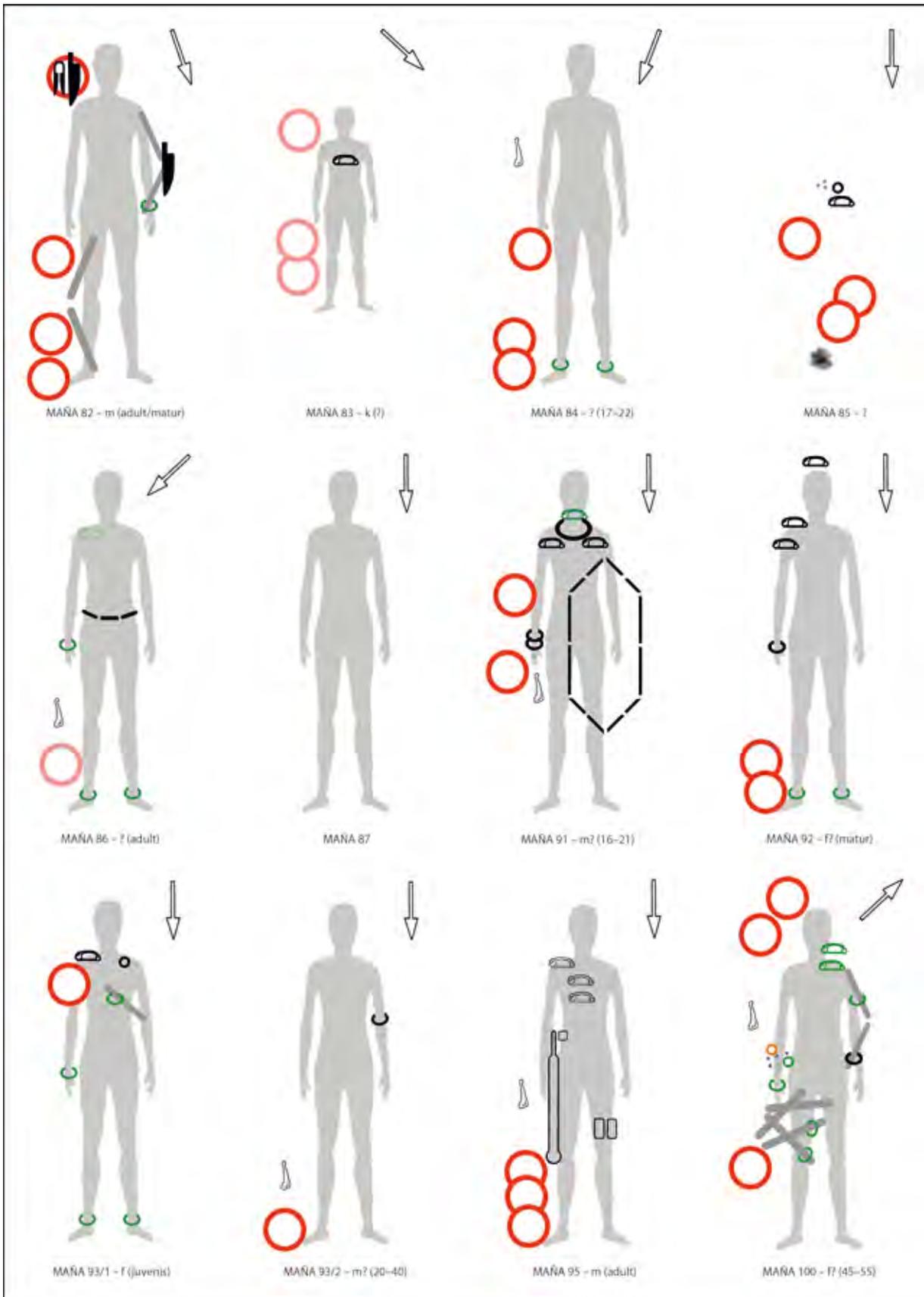


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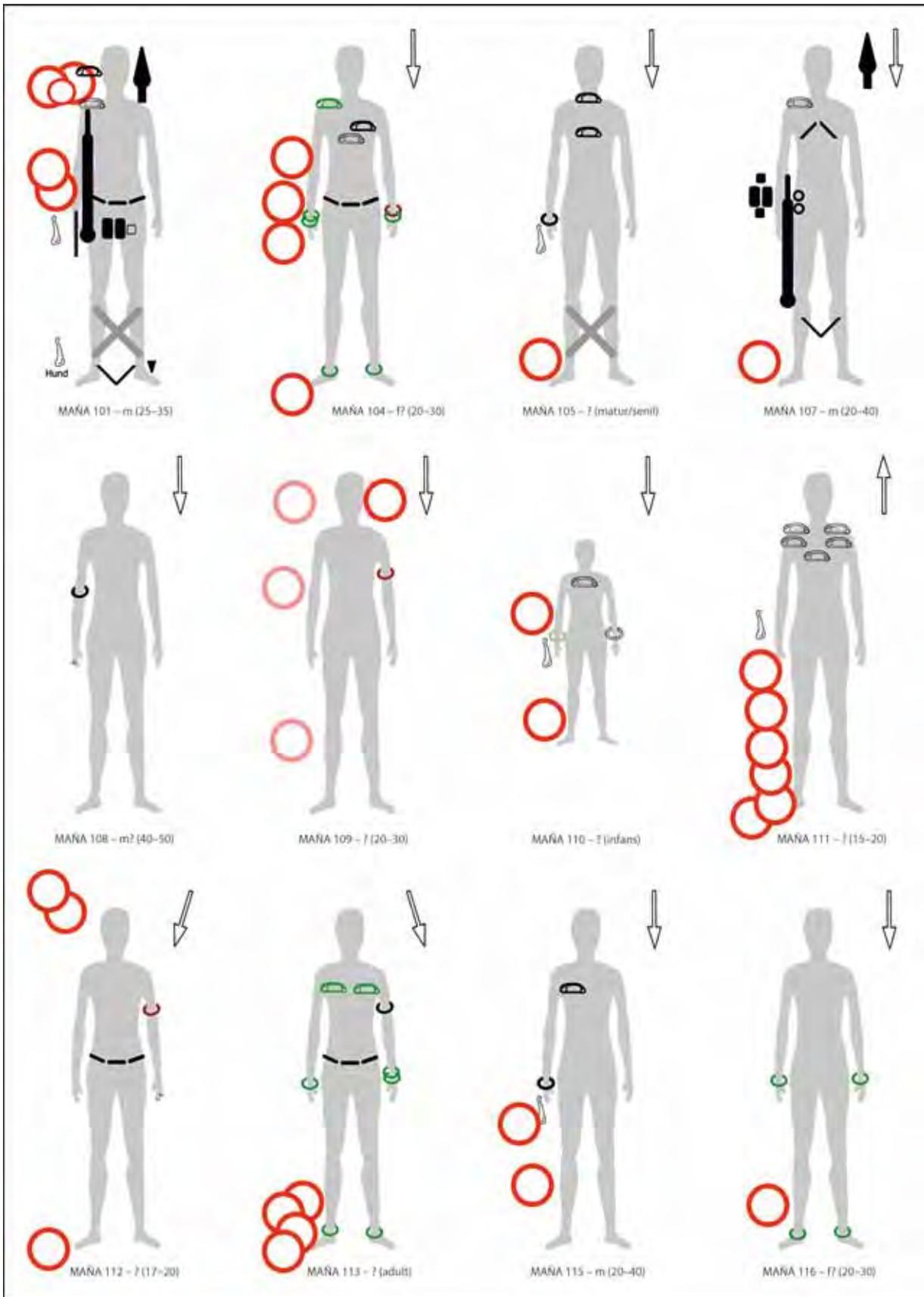


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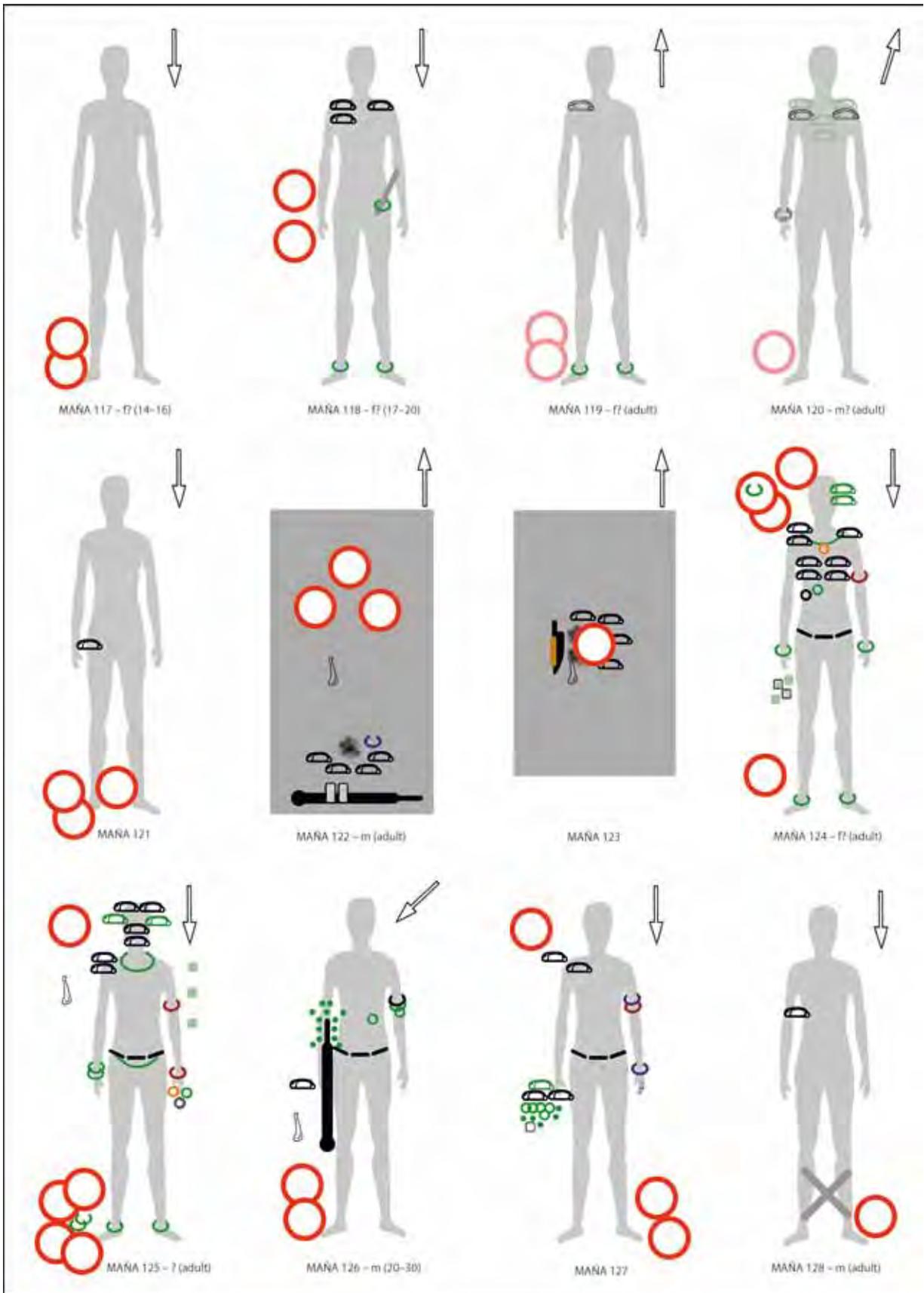


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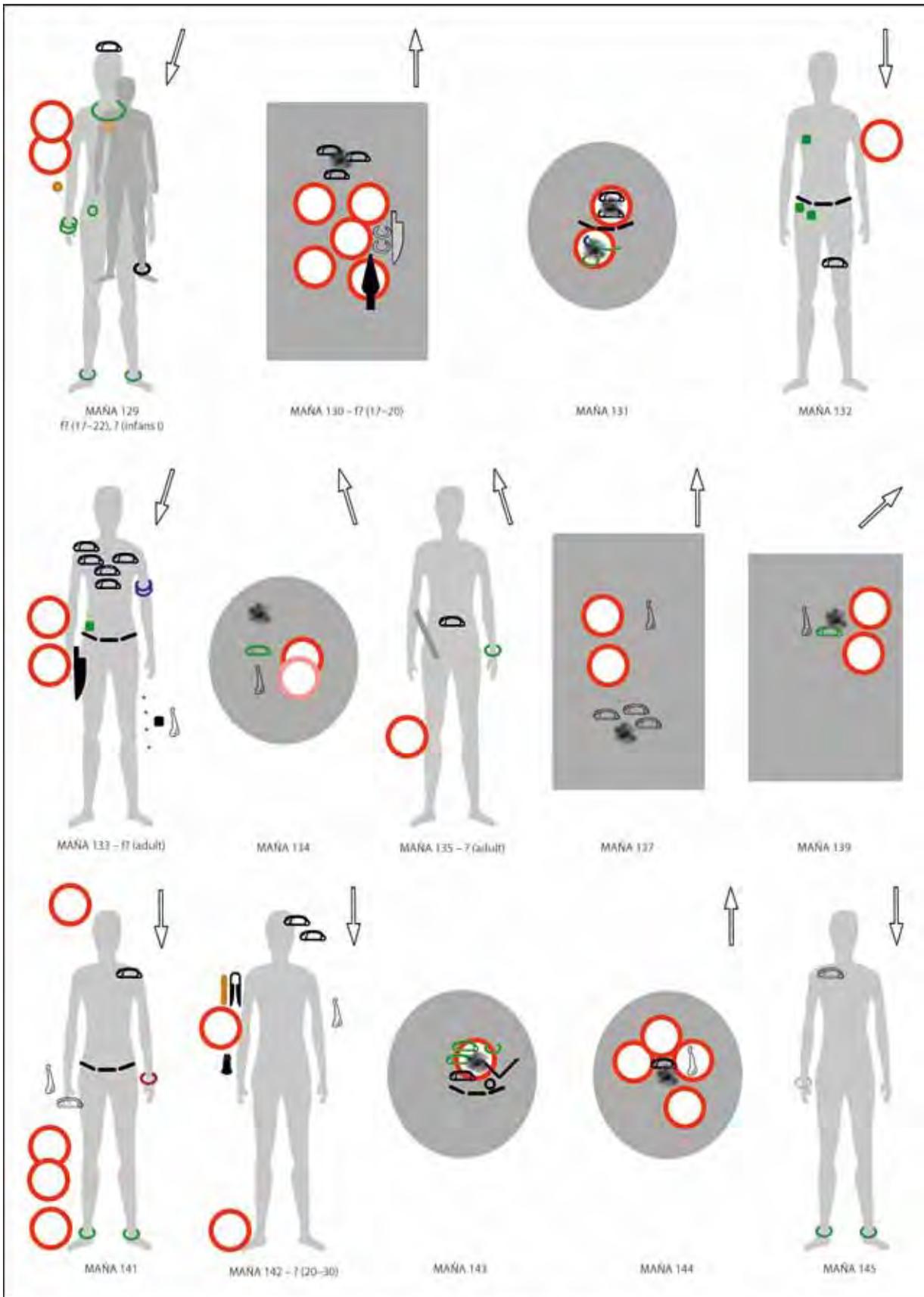


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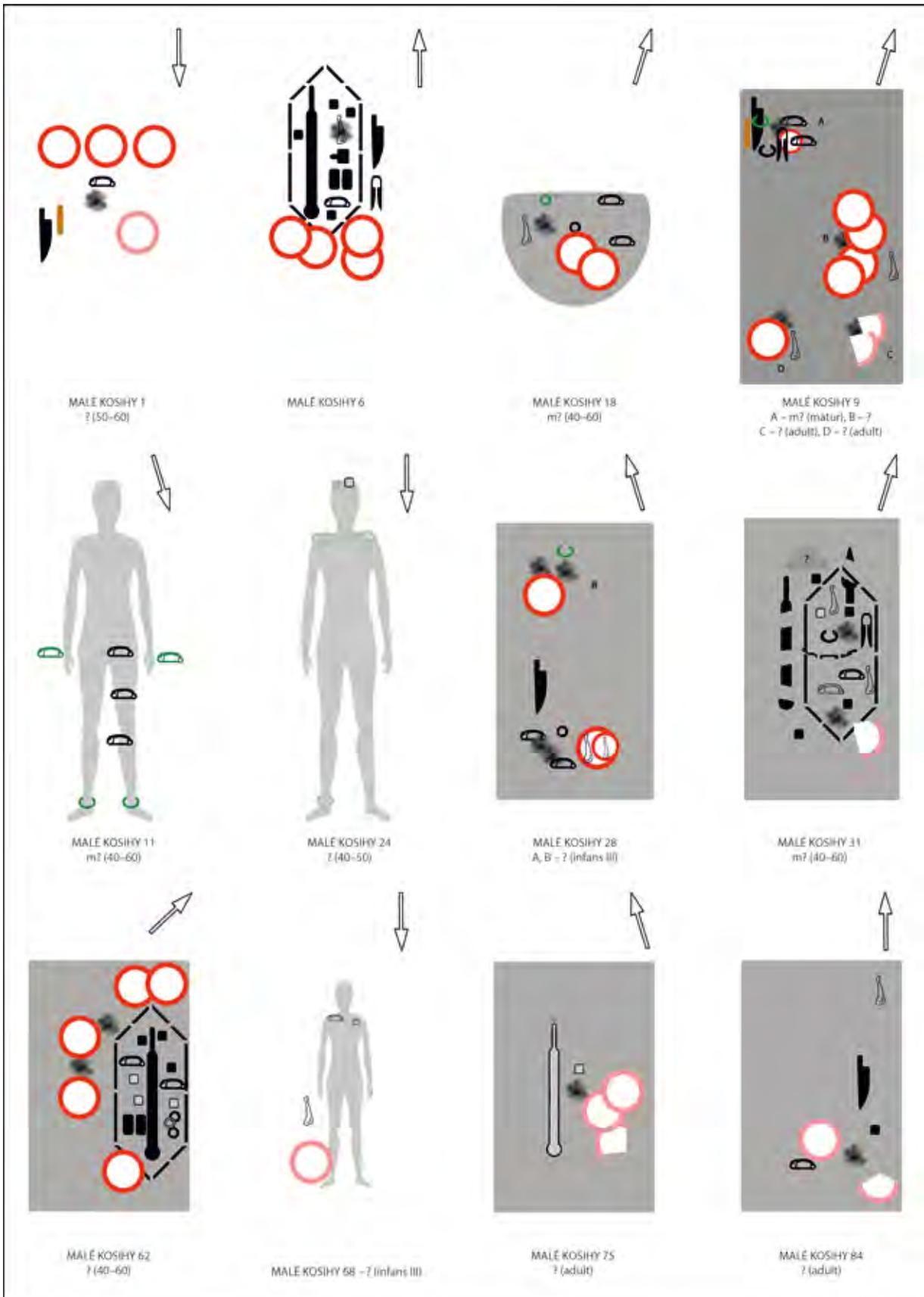


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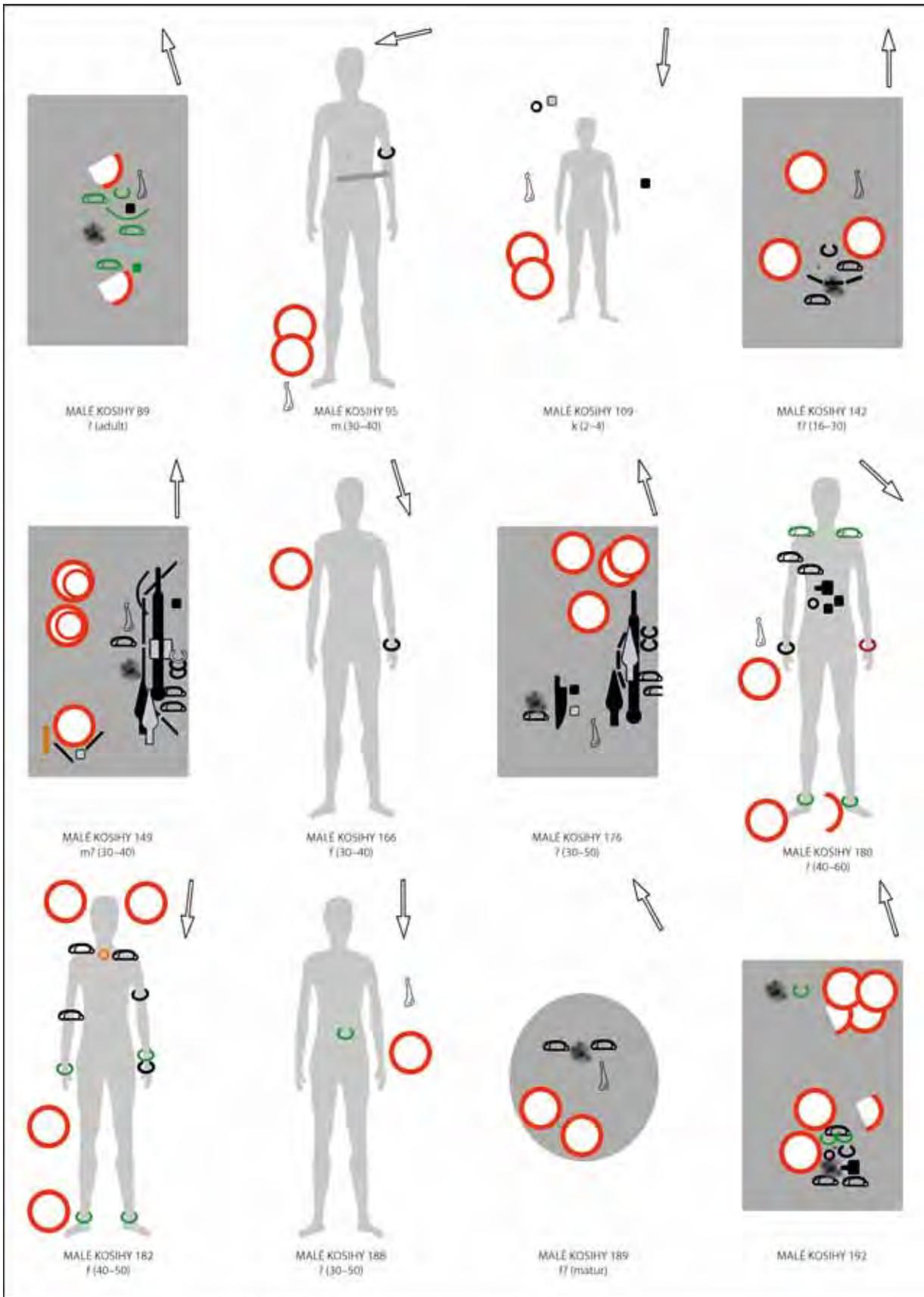


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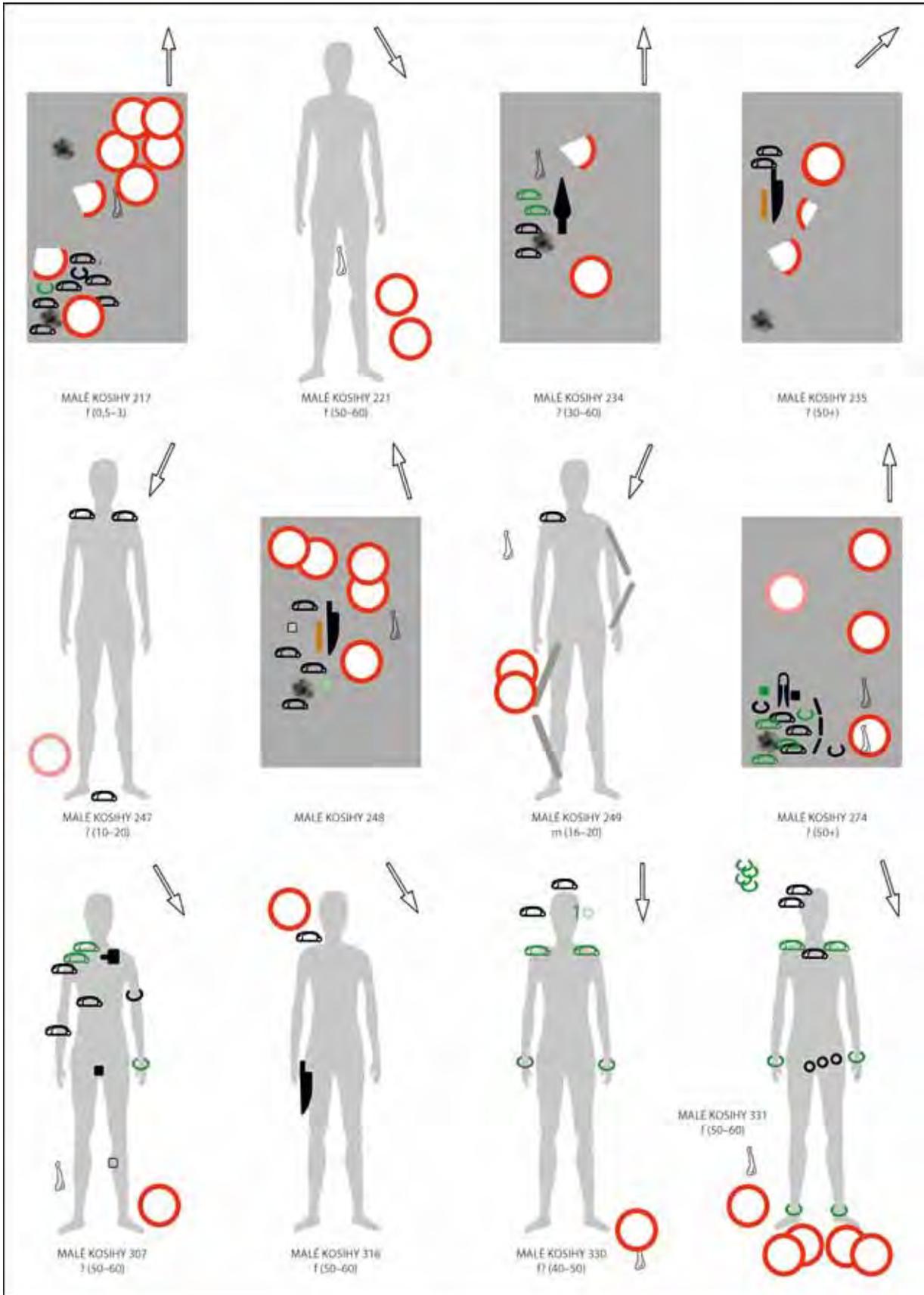


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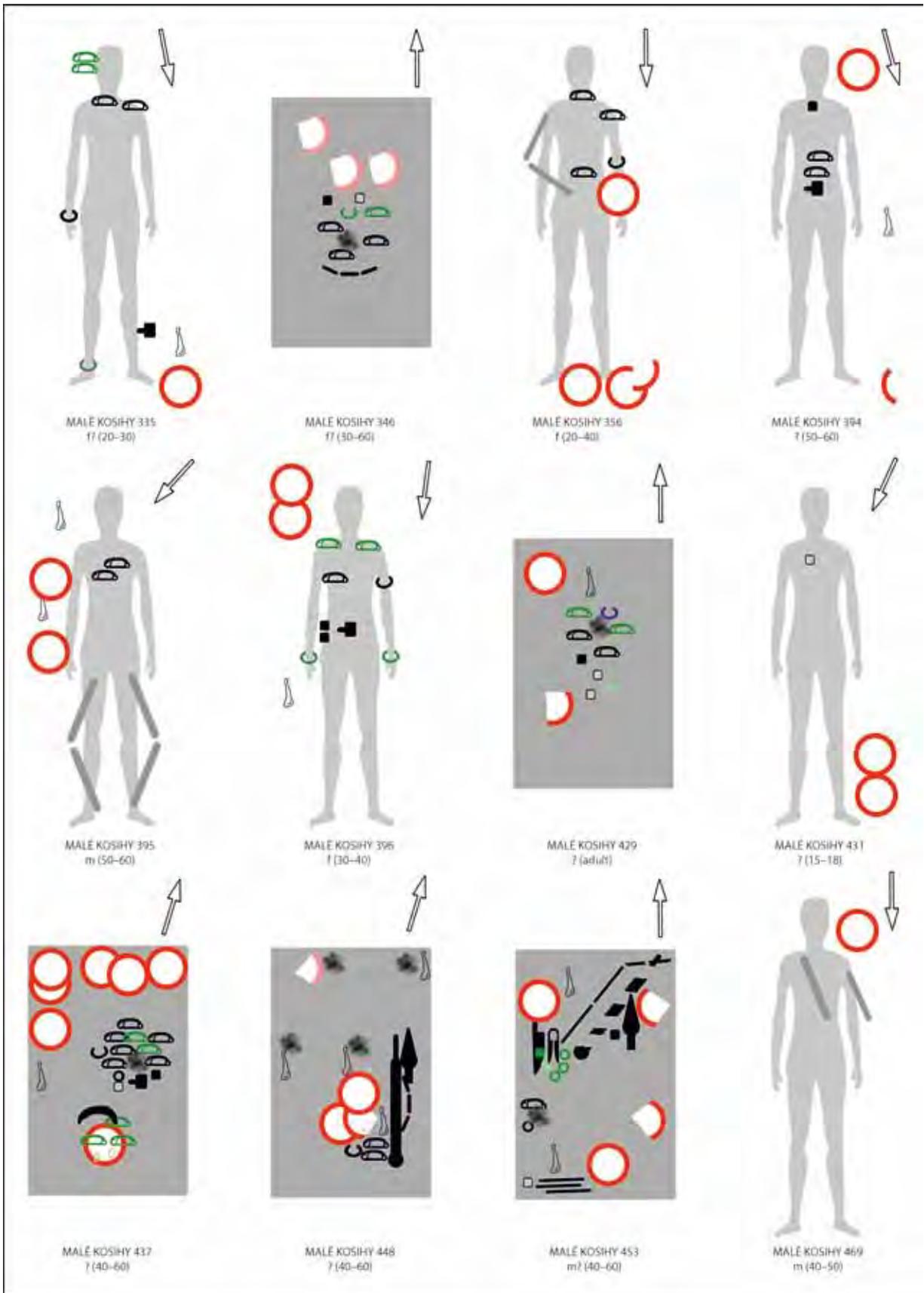


Fig. 10. Continuation.

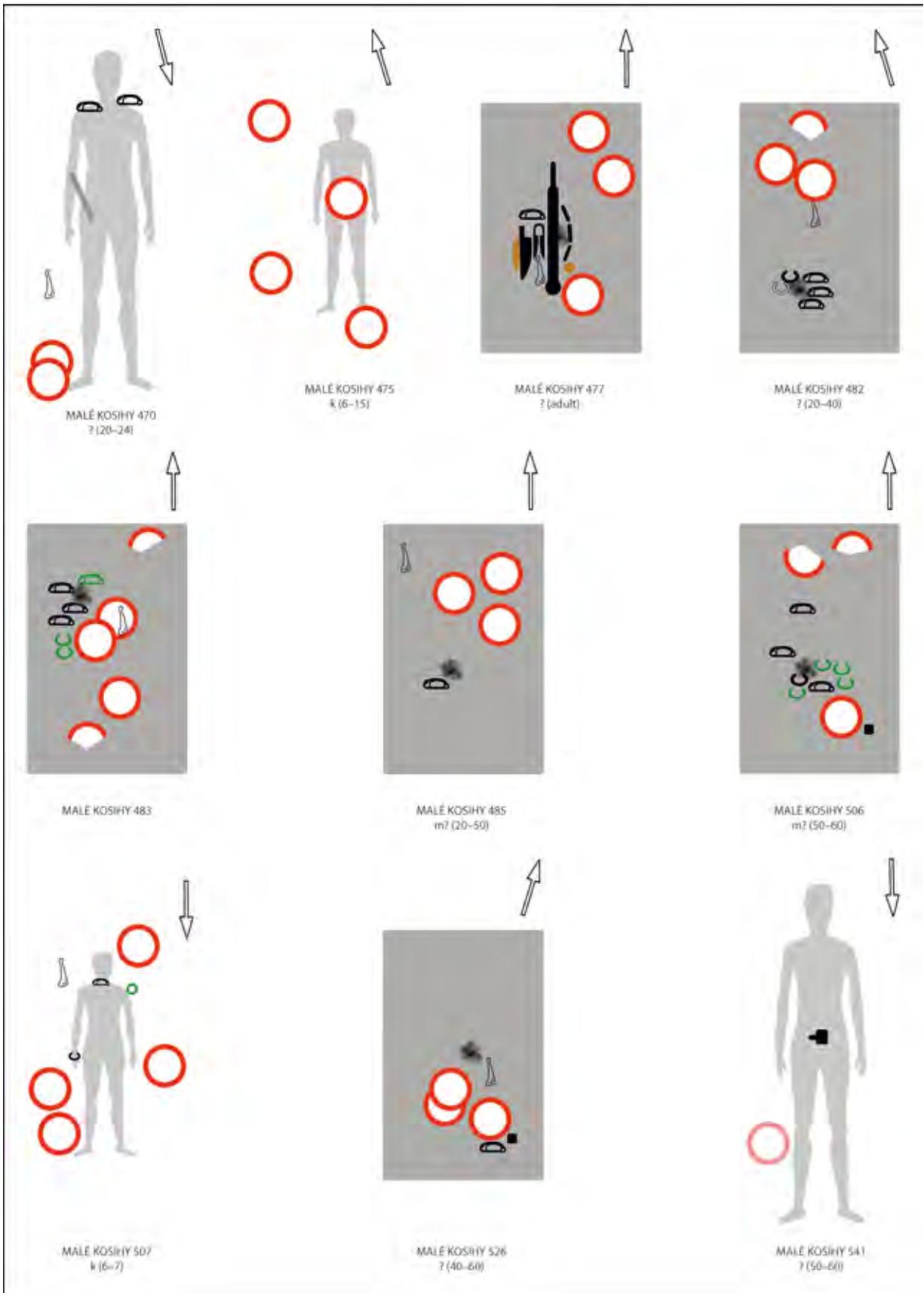


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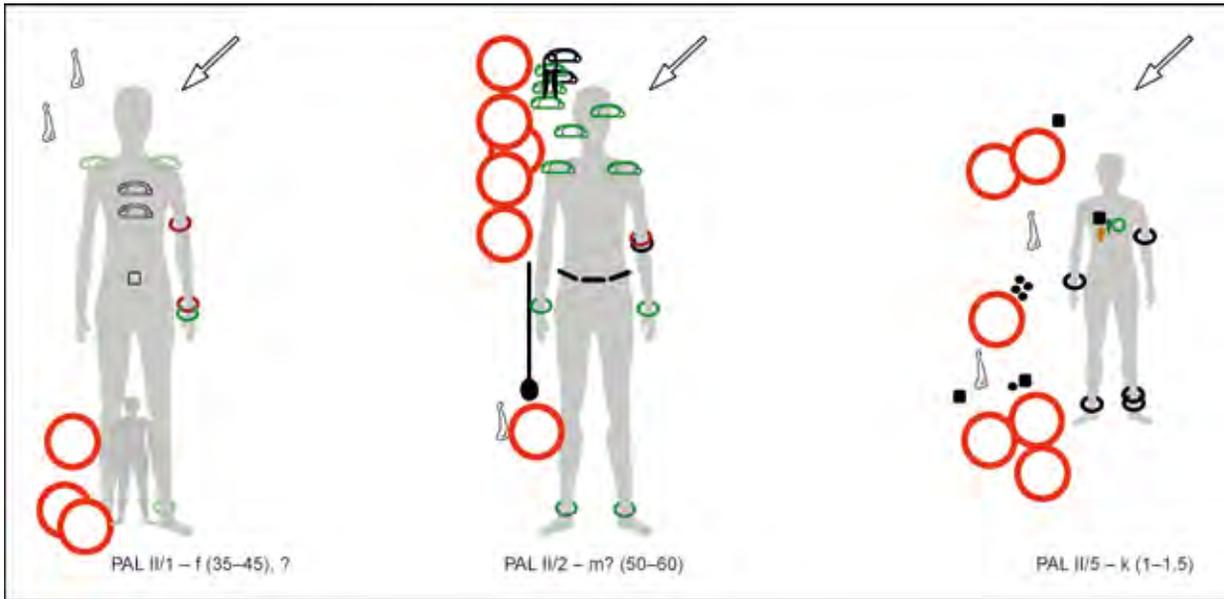


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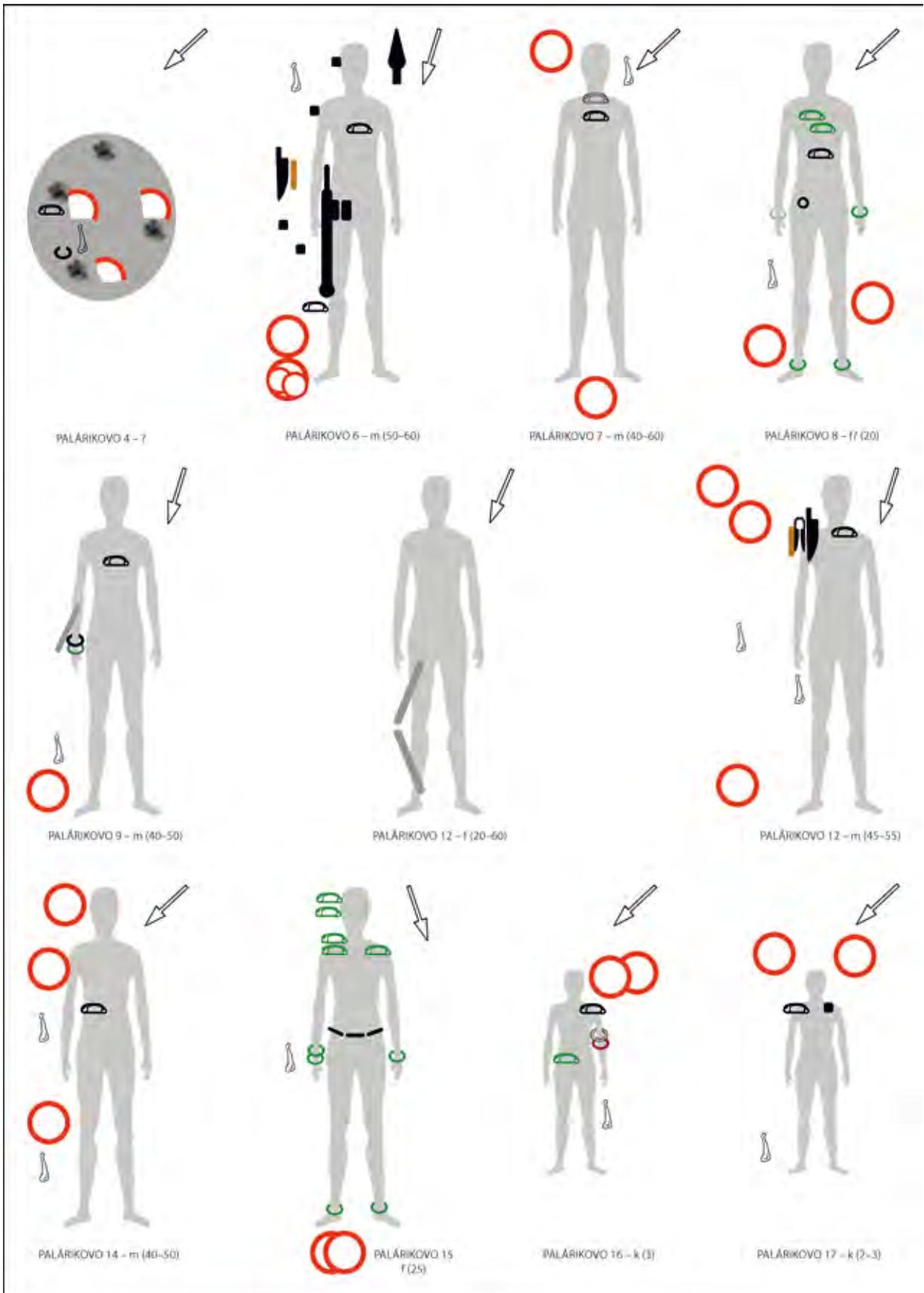


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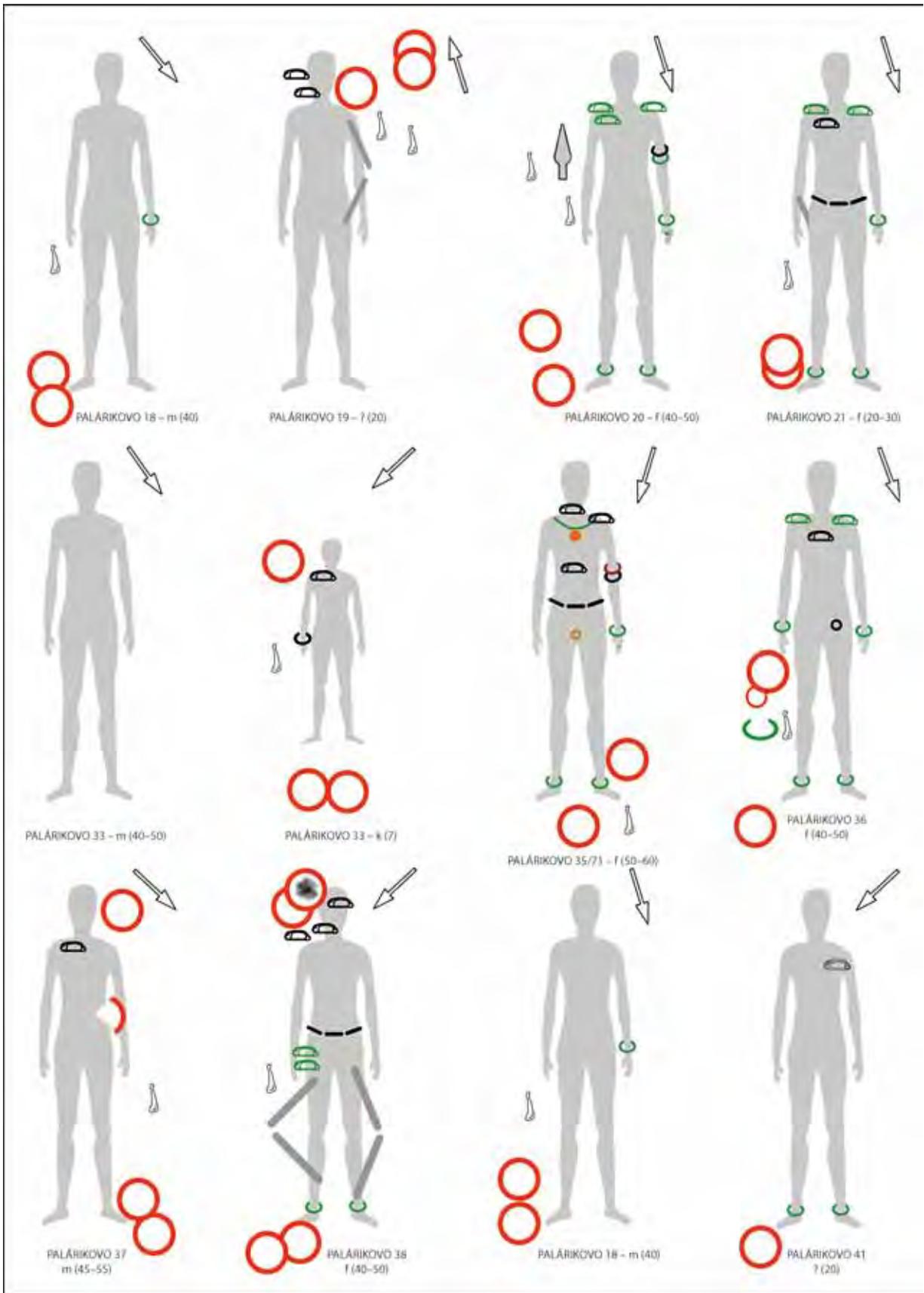


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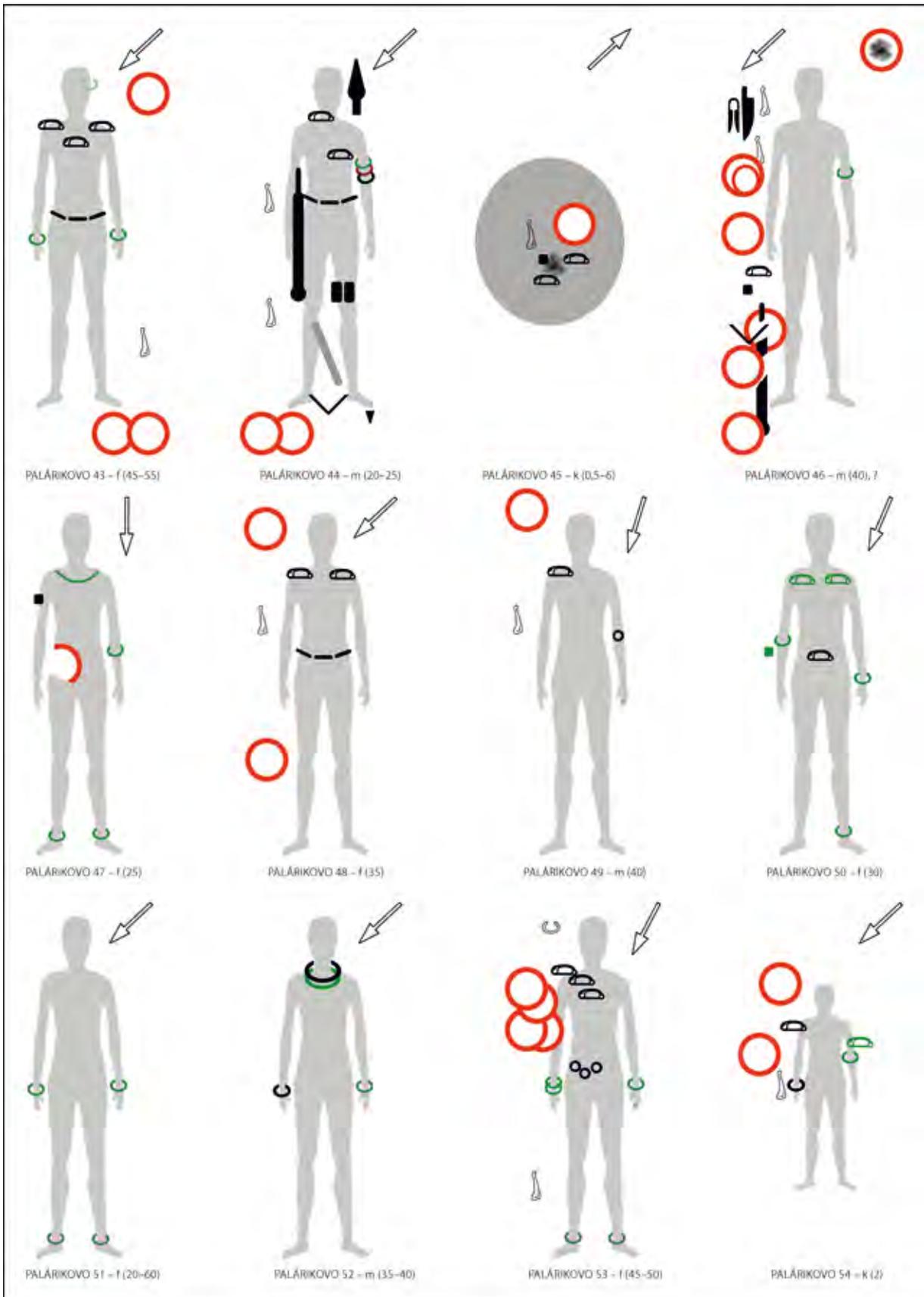


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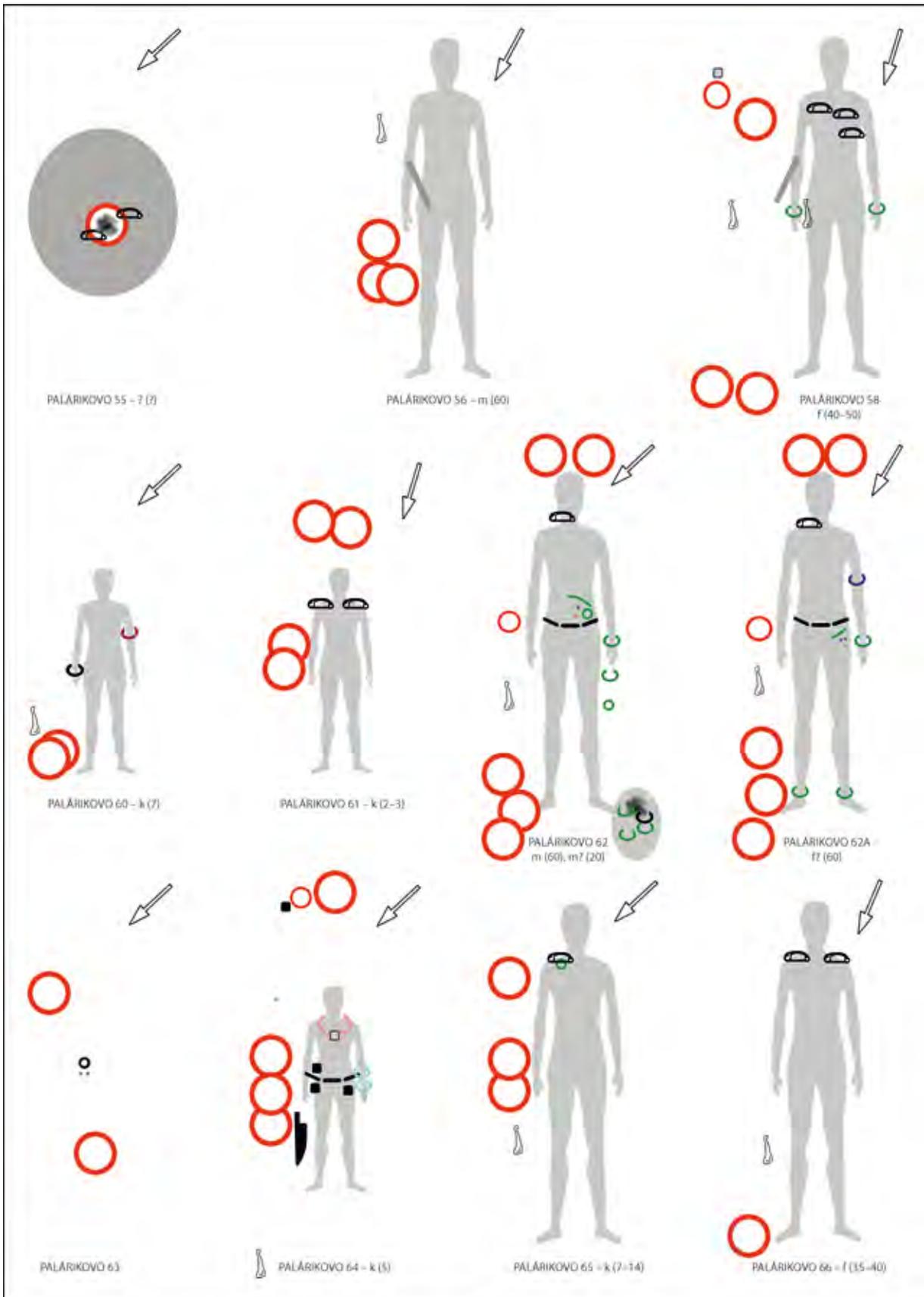


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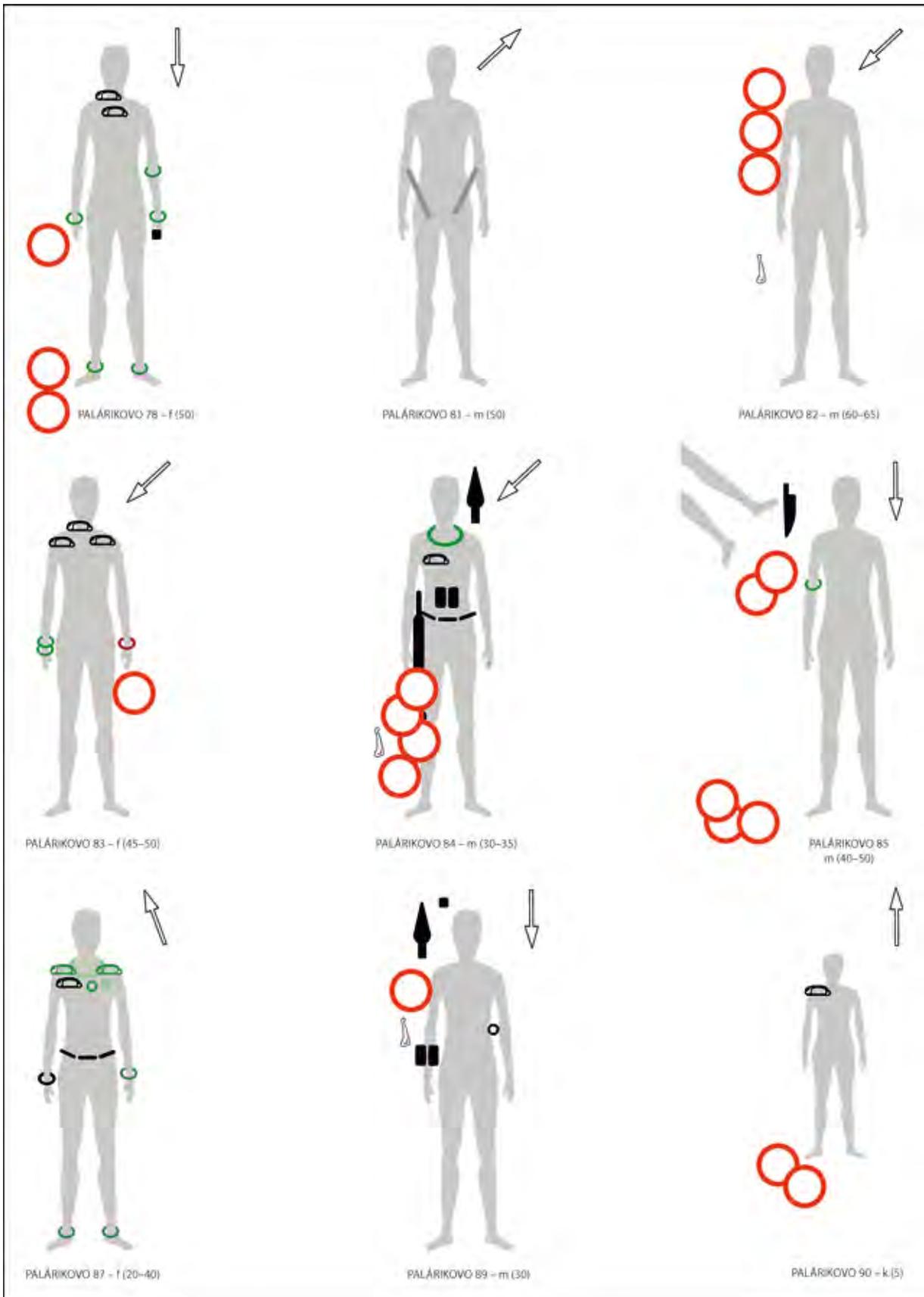


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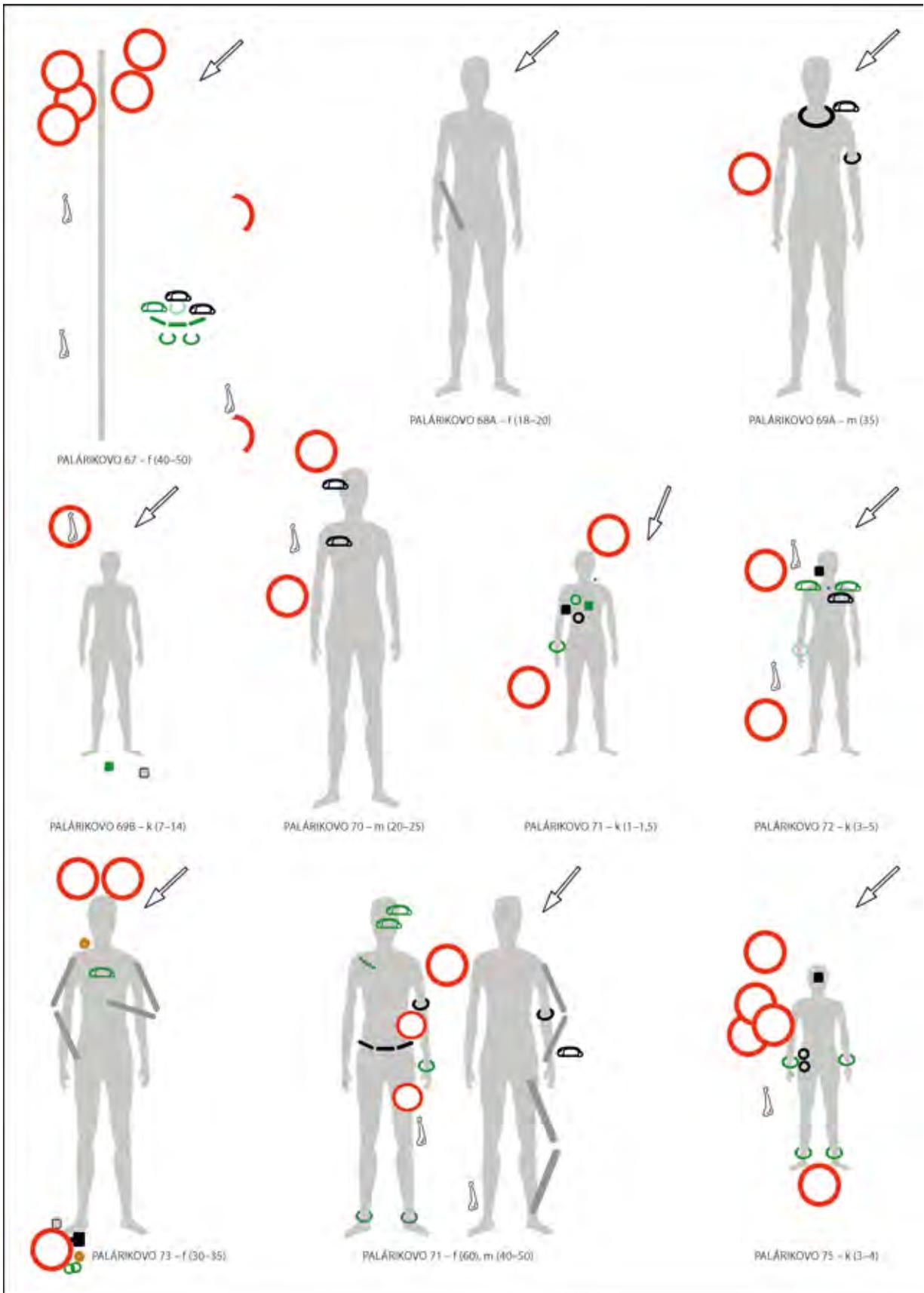


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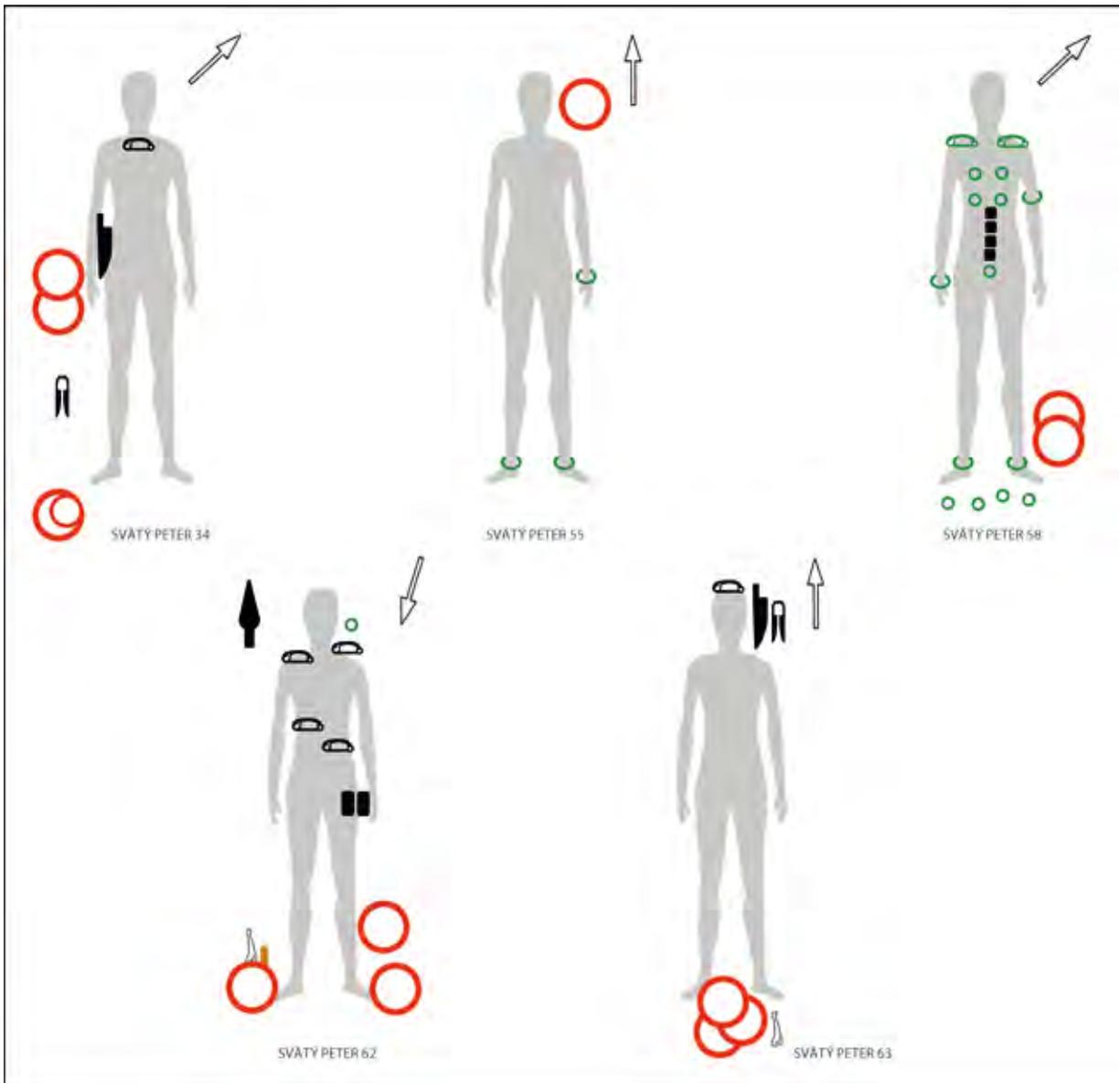


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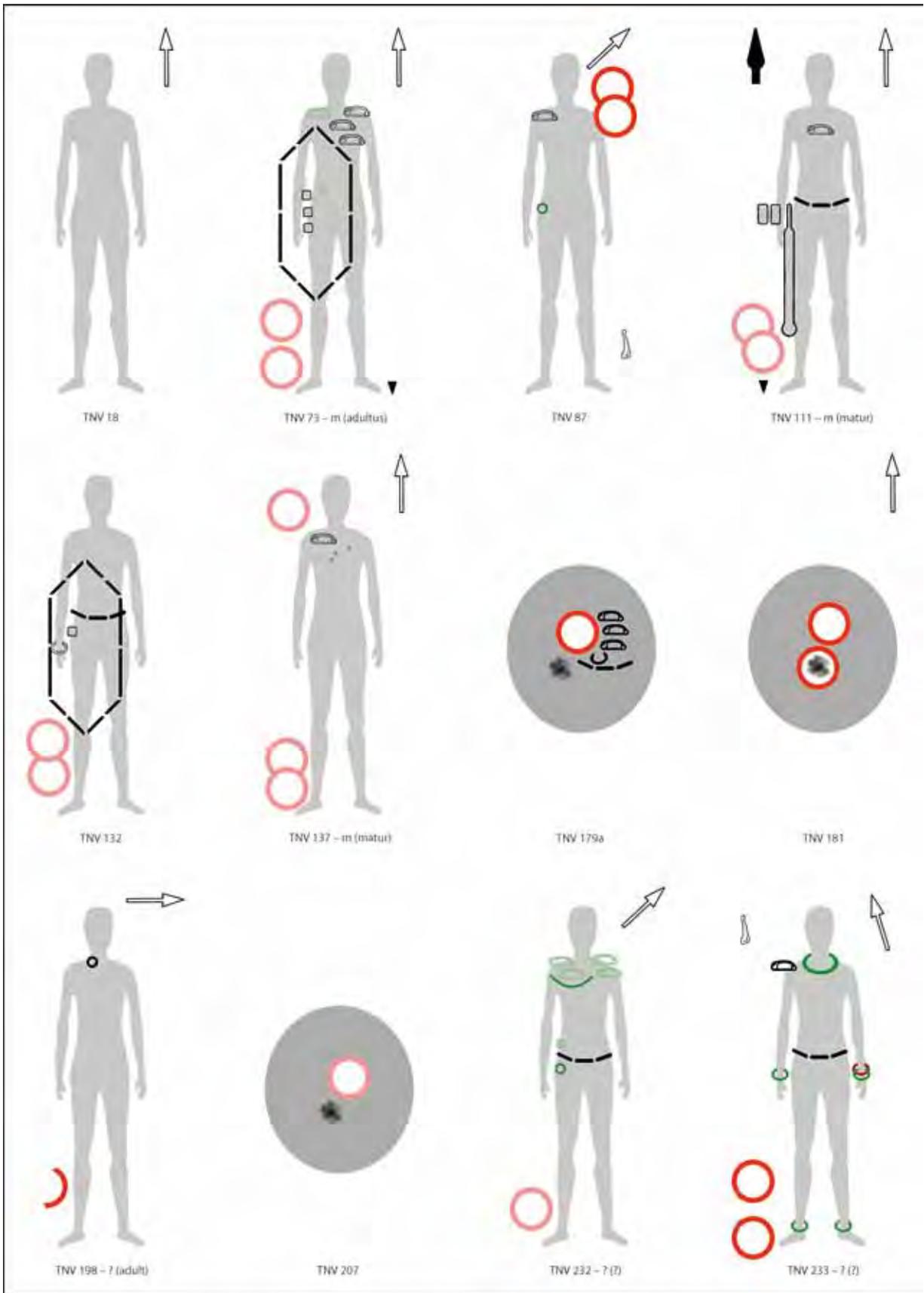


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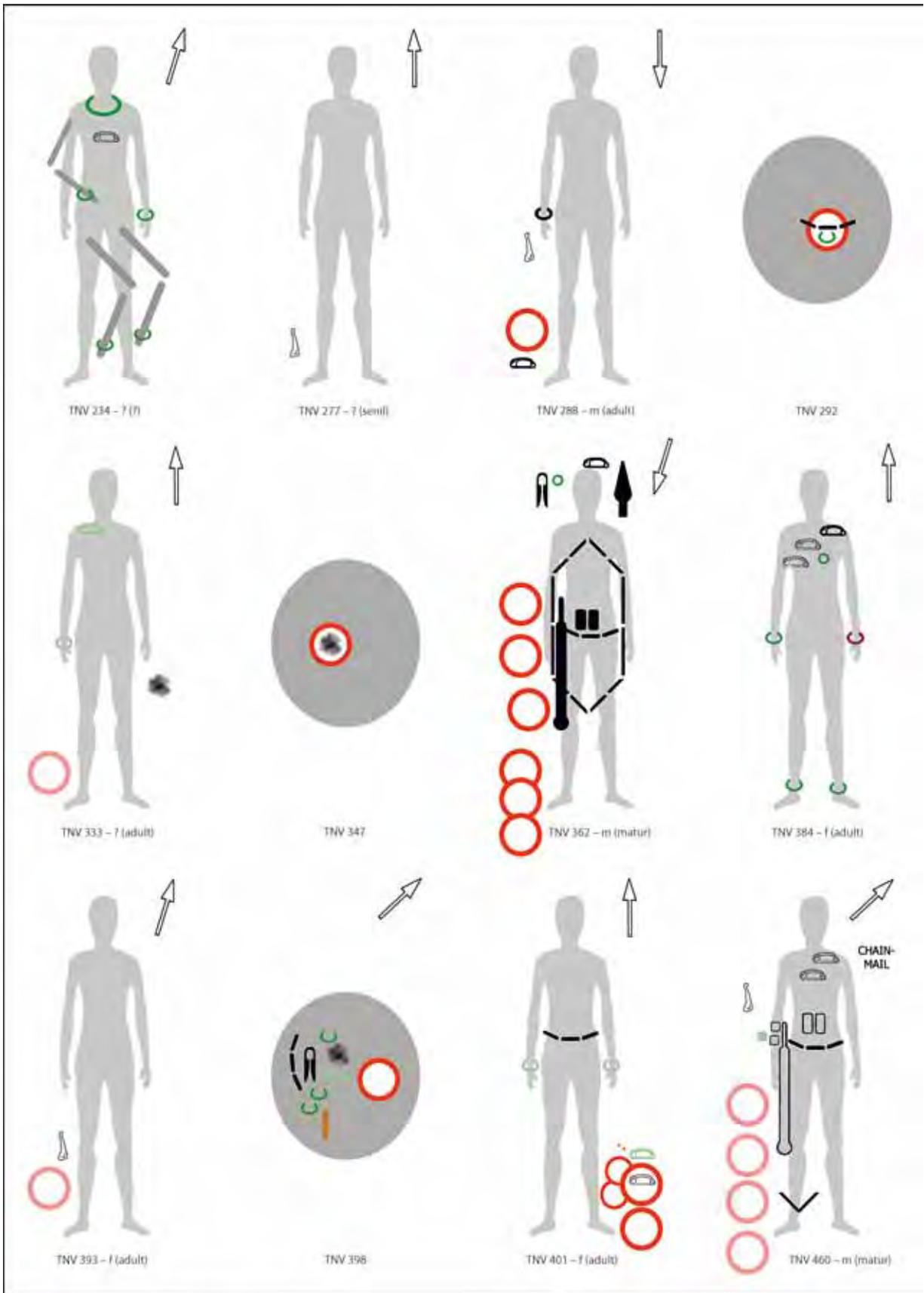


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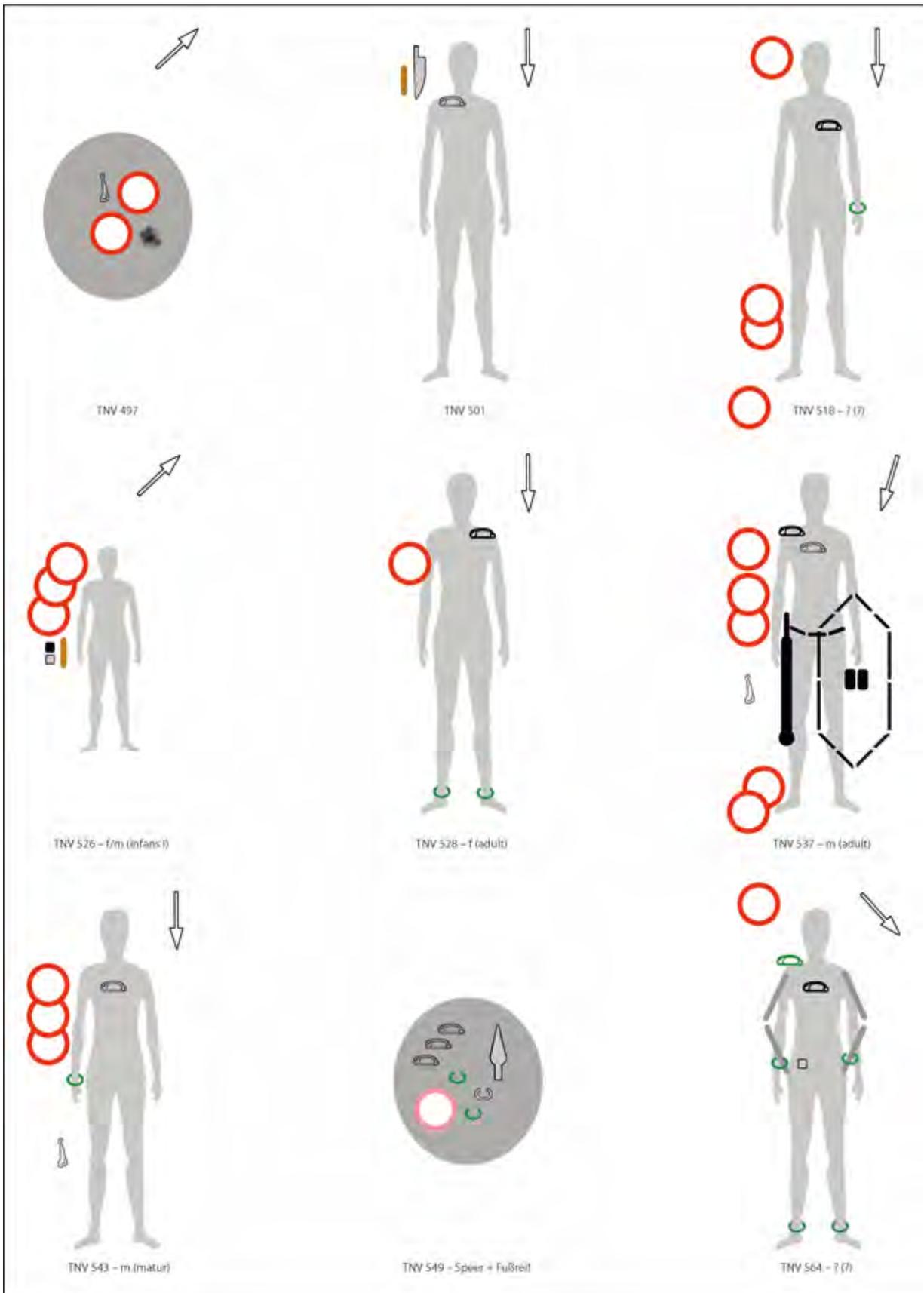


Fig. 10. Continuation.

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Research history

At least since the medieval period, finds taken out of the earth have been said to be remains of ancient or pagan times. During the Renaissance, such interest in antiquity grew. From 1707 in the area around Eggenburg several Boiic gold pieces with indentations (*Regenbogenschüsselchen*) were found. A very interesting report of this is from R. Pococke in 1736/1737, who visited several prehistoric and ancient monuments on his way to the Levant and also observed the now lost hoard of silver coins in Braunsberg. From his description, the coins were probably eastern Celtic embossed in silver. In all likelihood the hoard was melted down.

During the 19th century, serious and professional researchers became interested in prehistoric monuments. In 1871 the pre-Roman Iron Age was divided by Hans Hildebrand into the Hallstatt and La Tène period (*Groupe de Tène*). That same year, at the Vitusberg next to Grafenberg in Waldviertel (Lower Austria), a variation of a *Münsinger Fibel* was found by Candid Pontz Reichsritter von Engelshofen. It is still at the prehistoric department of the Naturhistorischen Museum in Vienna (Fig. 11).



Fig. 11. Brooch from Vitusberg (Lower Austria; photo A. Kern, NHM-Wien).

As a shining example of an archaeologically rich area we need mention the Traisen-valley in central Lower Austria.

The close location to important trade routes, like the east-west connection along the Danube, but also the north-south route along the Traisen- and the Kamp valleys, meant perfect economic conditions. Therefore, Central European conditions strongly fostered conurbation. Especially in the early Bronze Age and later in the early La Tène period, we can see peaks of settlement and burial activities.

Beginning in the mid-19th century, there are written sources about prehistoric finds in the Traisen valley. It was especially the abbots of the monasteries located in the valley (Herzogenburg, Göttweig) who first collected and preserved these finds. Excavated treasures of coins are mentioned from the 17th century.

The monastery of Göttweig houses a collection consisting of approx. one hundred objects which were gathered by the clerical researchers of the surrounding parishes. Under abbot Gottfried Bessel (1714–1749), it was known as a *Kuriositätenkabinett*. Bishop Altmann recognized 11th-century remains of prehistoric (“pagan”) inhabitants at the Göttweiger Berg. During the building of the monastery, in the years 1746, 1777, and 1847 it is mentioned that inside the prehistoric fortification (late La Tène period), the remains of Roman buildings had been discovered, together with bronze and gold coins. New finds were made during reconstruction work at the monastery in 1962-67 (*Neugebauer 1993*).

The Augustiner-Chorherrn monastery, which was moved to Herzogenburg in 1244, possesses famous art treasures, including collections of coins and prehistoric artefacts. The Chorherrn’s Quarin Holl (1706–1781) and Petrus Schreiber (1761–1814) made the first purchases and a catalogue as well. The provosts Frigidan I Knecht (1740–1775) and Georg IV Hahnl (1946–1963) expanded the collection significantly.

The provost Aquilin Leuthner (1811–1832) gave orders to Ludwig Josef Mangold to build up an *Antiken- und Raritätenkabinett*, which was to be devoted to the discoveries from excavations. The expansion of the prehistoric collection was also owed to the provosts Georg III Baumgartner and Georg IV Hahnl, who can be called researchers of prehistory. The museum of the diocese in St. Pölten also owns a wealth of prehistoric artefacts and archaeological finds that can be seen as the inheritance of the caretaker Johann Fahrngruber (1845–1901; *Ramsl 2012a*).

As one of the notable persons who researched the Traisen valley, the abbot of Göttweig, Dr. Adalbert (Alois) Dungal bears mention, as he started the excavations into the Hallstatt-period tumuli of Gemeinlebarn and the cemetery of Statzendorf. In 1891 the Benedictine Lambert (Ferdinand) Karner (1841–1909) recovered the famous grave with the Situla at Kuffern. Josef Szombathy, Ambros Zündel, and Josef Bayer can be named as further researchers in the Traisen valley. The research of the last decades has been admirably pursued by the department of heritage under the section lead by Johannes-Wolfgang Neugebauer (summarized in *Neugebauer 1992* and in several “Fundberichte aus Österreich”). Here, as a result of the construction of the S 33 motorway and the extraction of gravel in the vicinity, findings of both quantitative and qualitative value were revealed – indeed, these are the most important findings of central Lower Austria.

In this valley, with its extensive terraced landscapes, finds were made from all time periods. From the Hallstatt period, several cemeteries and settlements like Franzhausen, Gemeinlebarn, Wagram ob der Traisen, and Reichersdorf – just to name some – are known. It seems very interesting that in several settlements and cemeteries we can see a continuum from (at least) the late Hallstatt period to the La Tène period. The necropolis of Franzhausen runs from Ha C to the early La Tène period, according to the present information. The most important cemeteries are located in Kuffern (*Urban 2012a*), Oberndorf in der Ebene (*Ramsl 2012b; Ramsl, in prep.*), Ossarn (*Urban 2012b*), Gemeinlebarn (*Ramsl 2012c*), Herzogenburg-Kalkofen (*Urban 2012c*), Inzersdorf-Walpersdorf (*Ramsl 2012d*), Inzersdorf (*Urban 2012d*), Getzersdorf (*Ramsl 2012e*), Reichersdorf (*Urban 2012e*), Franzhausen (*Ramsl 2012f*), and Pottenbrunn (*Ramsl 2002a; 2012g*).

Nor should we forget the tumuli from Rassing at the Perschling valley (*Preinfalk 2005*) which had been excavated (under the leadership of Christoph Blesl) by Fritz Preinfalk during construction of the high-speed rail (HLAG) of the national Austrian railway company (ÖBB). Remains of settlements from the early La Tène period are known at Inzersdorf-Walpersdorf, Franzhausen, and Wagram, for the middle La Tène Period in Angern and Gemeinlebarn, as well as for the late La Tène period in Herzogenburg-Kalkofen, Göttweiger Berg, and Etzersdorf (*Neugebauer 1992, 38*).

Also explored were the hillforts near Gars-Thunau (*Karwowski 2006; 2012*) and at the Oberleiserberg (*Kern/Karwowski/Militký 2012*) as far as those along the Danube like Freinberg (*Urban 2012f*) and Gründberg (*Urban/Ruprechtsberger 2003*) near Linz, Leopoldsberg in Vienna (*Urban/Cech 1999*), and the Braunsberg (*Urban 1995*). Nor can we forget the flatland settlements at Göttlesbrunn (*Karl 2012*) and at the Sandberg in Roseldorf (*Holzer 2007; Kern 2012*) and Haselbach (*Trebsche/Fichtl 2018*). Because of its strategically advantageous position at the border to the Carpathian Basin and its rich and fertile soil, the area around the Leitha hills in eastern Austria was always populous throughout prehistory. On the western side, situated on the terraces of the River Leitha, many La Tène period settlements and cemeteries have been discovered in the last 150 years (*Neugebauer 1992, Fig. 7*). The most prominent ones include Mannersdorf (*Ramsl 2011*), Au (*Nebenhay 1971; 1973*), Pöttsching (*Jerem 2012*), and Loretto (*Ramsl 2012h*). This area has also been investigated within the framework of the FWF Project (P1644), which provided us with detailed maps of the Iron Age landscape (*Doneus 2015, Fig. 8*).

State of research

Due to increased land development, road building, gravel quarrying, and new methods of agriculture (deep ploughing), extensive rescue excavations were started by the National Heritage Agency in Austria (*Blesl 2012; Blesl/Gattringer 2004; Neugebauer 1981; Preinfalk 2005; etc.*) and the local museums. Analysis of the finds, however, could not keep up with the amount of material unearthed. In the Traisen valley, well-documented contexts from the cemeteries of Pottenbrunn (*Ramsl 2002a; 2002b*), Ossarn, and Oberndorf (*Ramsl, in prep.*), Inzersdorf (*Neugebauer 1996*), Gemeinlebarn (*Neugebauer et al. 1993; Neugebauer 1994; 1999*), including new data from Franzhausen (*Neugebauer 1992, 48*) and Walpersdorf (*Neugebauer 1999*), are the basis of this study. The cemetery of Pottenbrunn near St. Pölten was analyzed successfully in the FWF project

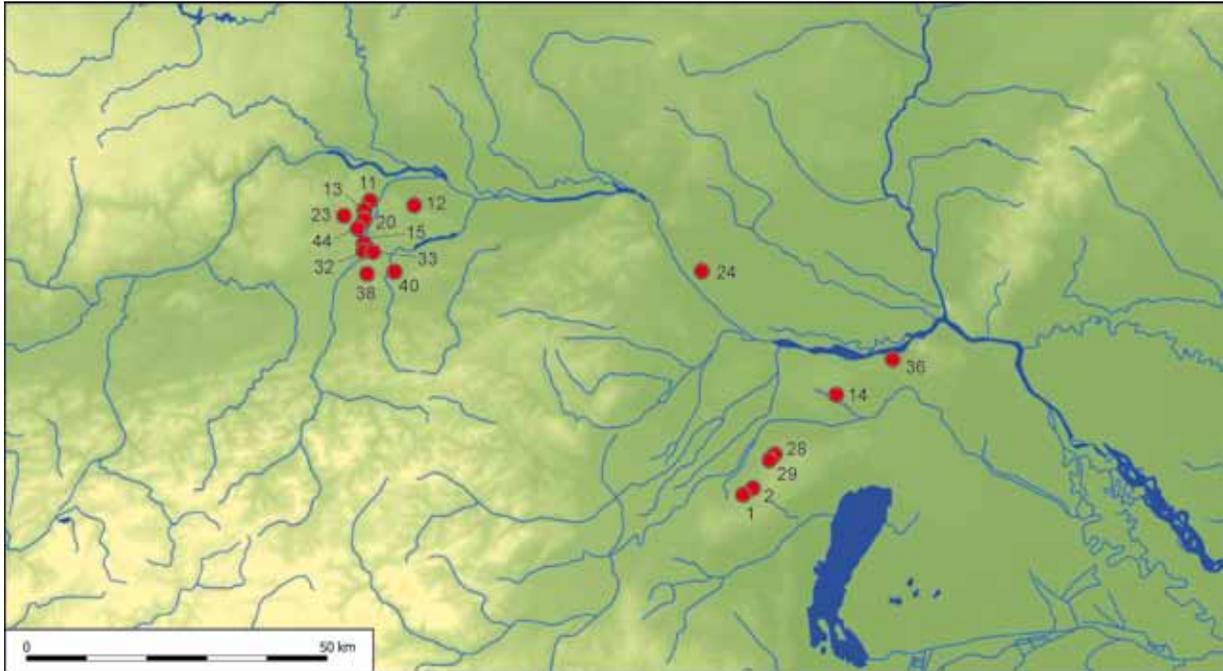


Fig 12. Austria. Map of selected sites. 1 – Au/Leithaberge, KHW; 2 – Au/Leithaberge, MBÄ; 11 – Franzhausen; 12 – Gemeinlebarn; 13 – Getzersdorf; 14 – Göttesbrunn; 15 – Herzogenburg; 20 – Inzersdorf; 23 – Kuffern; 24 – Leopoldau; 28 – Mannersdorf/Leithagebirge I; 29 – Mannersdorf/Leithagebirge II; 32 – Oberndorf in der Ebene; 33 – Ossarn; 36 – Petronell-Carnuntum; 38 – Pottenbrunn; 40 – Rassing; 44 – Walpersdorf.

P12531-SPR and was published in 2002 (Ramsl 2002a). A continuation was to study further important cemeteries as Ossarn and Oberndorf (FWF-Project P23517-P19), which will probably be published soon.

Cemeteries (Fig. 12; 13)²

Au am Leithaberge, site Kleine Hutweide (AU-KHW), distr. Bruck/Leitha

The cemetery is located on the northwestern foothills of the Leitha hills. Between 1926 and 1931, 28 burials, mainly inhumation burials of the periods LT B and C were uncovered under the direction of Alexander Seracin. The graves mostly had stone packages; noteworthy is the fact that some had enclosures in the form of dry stone walls instead of the usual burial gardens. Stone pavements were also found within the burial ground. Worth emphasizing is the grave of a blacksmith (grave 13). This identification is plain because of the finds of iron chisels, an anvil (?), and a hammer head. Furthermore, in addition to the usual ceramics, an iron hand chain as well as several swords and lance tips were found in this burial. The material was published by S. Nebehay (1971; 1973).

Au am Leithaberge, site Mühlbachäcker (AU-MBA), distr. Bruck/Leitha

Between 1933–37 and 1970, a total of 17 inhumation burials were uncovered, with stone packages also being observed. Among them are multiple burials and secondary burials. Two further graves (which are likely to come from early excavations) were assigned in 1973 to this burial ground. According to previous publications, the burial ground can be dated to LT B1 and LT B2 (Nebehay 1973; 1977; Neugebauer 1992).

² Schematic graphics of La Tène burials in Austria: for Austria, the cemeteries of Au-KHW, Au-MBÄ, Franzhausen, Gemeinlebarn, Getzersdorf, Göttesbrunn, Herzogenburg, Inzersdorf, Kuffern, Leopoldau, Mannersdorf I, Mannersdorf II, Oberndorf, Ossarn, Petronell-Carnuntum, Pottenbrunn, Rassing and Walpersdorf have been chosen because of the quality of the datasets. Some graves (e.g., in Franzhausen or Göttesbrunn) are not recorded because of severe robbing.

Franzhausen (FH), distr. St. Pölten

To date, this is the largest Iron Age necropolis in the Traisen Valley. Excavated since 1981 as a result of gravel mining. Oriented north-south, 330 by 120m, between two Bronze Age necropolises (Franzhausen I, II). Altogether 273 graves of the Hallstatt culture and 170 of the La Tène culture have been recovered so far. To mention are the areas with circular or square grave enclosures. At the border of these areas are objects with double trenches in the respective shape (cult areas?). Gaps in the occupancy suggest the onetime presence of paths or streets. Although the burials, (60% inhumation, 40% cremation, 11 double burials, one multiple burial) were severely disturbed and robbed, exceptional finds (such as a fibula with a bird-shaped foot-decoration from grave 444, or a mask fibula with griffin head and palmette) indicate the former wealth and the quality of the equipment. Outstanding finds: grave 30 with a bronze shield fitting (spindle) and 4 rosettes as well as 2 fibulae type Speikern; grave 98 with a gold disc brooch and an open worked belt hook in palmette shape. Tomb 332 contains i.a., an iron belt hook with a box-shaped fitting with meander decoration. Grave 295 contained a complete male burial with an iron spindle-shaped shield buckle (see Glauberg, tomb 1, tumulus 1), a sword with scabbard and textile wrap, a spearhead, 2 bronze fibulae, and a golden earring. Grave 768 disclosed a sword with bronze sheet scabbard and textile remains, a large Certosa fibula, a spearhead, a long belt hook and metal remains, possibly pointing to a helmet made of organic material. In addition, a bowl with stamping impressions on the inside and a large knife and a smaller knife with grindstone (*Neugebauer 1992; Neugebauer et al. 1991; Neugebauer/Gattringer 1984; Renhart 1990*).

Gemeinlebarn (GM), distr. St. Pölten

Two grave groups and a settlement of the La Tène period in the Lower Traisental Maisgasse. In November 1993, four early La Tène inhumation burials were uncovered during rescue excavations. Noteworthy is a richly equipped woman's burial (no. 132) with 2 bird-shaped fibulae and a fibula with mask decoration. Furthermore, a necklace with a metal hollow bead, three profiled bracelets, as well as a finger ring, iron belt hooks and five ceramic vessels, including a bowl of the type Stupava were found. In 1998, an urn burial destroyed by a plow (bird's head fibula) was discovered.

Schneiderweg: Early La Tène grave group with circular and rectangular grave enclosures. Grave 66 contained i.a., an iron scabbard (linen imprints), remains of coupling rings, circular bronze shoe buttons with rich ornaments, and several ceramic vessels, including an early flask bottle. Grave 82 contained a bronze fibula type Speikern (with mask representation at the bow), remains of a scabbard, a spearpoint, as well as a hollow ring. From the ceramics are a flask bottle with compass decoration, another flask bottle with omphalos, and a stamped vessel. One exceptional grave with a very early sword and double drum fibulae was excavated 2010 by the team of F. Preinfalk (*Neugebauer 1992; 1993; 1994; 1999; Preinfalk/Preinfalk 2014*).

Getzersdorf (GZ), distr. St. Pölten

The early La Tène graves in Lower Traisental (belonging to Inzersdorf and Walpersdorf) were discovered during gravel mining conducted from 1899 to 1923 in the area of Inzersdorf. During gravel mining ("railway gravel pit next to the station Getzersdorf") again and again graves came to light. There are a total of 13 body graves of the early and middle La Tène period, including a double burial. Noteworthy are a necklace with stamp-shaped ends and the plastically decorated bracelets. These tombs belong to a strip-shaped area of necropolises that are located in the hinterland of the first terrace stage of the Traisen and are several kilometres long (*Baumgartner 1906; Duval 1982; Neugebauer 1992*).

Göttlesbrunn (GB), distr. Bruck/Leitha

Part of a La Tène period cemetery, uncovered during construction work (widening) for the highway A4 Ostautobahn between Vienna and Budapest. In 2016, 19 graves (with 23 individuals; only one cremation) were uncovered during the rescue excavations. They are all more or less S-N oriented

and placed in rectangular shaped grave shafts. 84% of them can be described as robbed, 7 of them are male, 8 female, 3 children, and 1 undefined. Remarkable is grave 5 with the burial of a male individual equipped with female markers, such as a bronze necklace and symmetrical fibula costume – connected with a fragile bronze chain. Also two rare stone stelae were found here (Karowski/Czubak 2019).

Herzogenburg (HZ), distr. St. Pölten

In 1970, when expanding the gravel pit Alfred Kern on Parz. 224, at the site “Kalkofen”, a large area with prehistoric objects was uncovered.

Feature 1: a cremation grave with a central, partially robbed pit and a N-oriented, square trench with 90 cm depth (about 8x8 m); In the pit, 40–80 cm deep, a melted Kahn fibula, two graphitized pottery fragments, an iron knife with remains of the scabbard, a lance tip, an arrowhead, and smaller metal objects belonging to the weapon belt were found in situ. Dating La Tène A.

In December 1971, three early La Tène graves were recovered.

Grave 1: for the most part already destroyed by gravel pit work, this grave pit contained some ceramic sherds and bone remains. Around the grave two circular ditches with 21 and 27.6 m cross section. The trenches were examined in 1972.

Grave 2: almost square grave pit with a side length of 280 cm. The pit had at each corner a circular post hole and was recessed to 30 cm below the top of the gravel. Body burial in extended supine position, orientation S–N. The tomb had already been disturbed in ancient times; it lacked the forearm and hand bones as well as the bones of the chest area, where only an iron knife and a small bronze fibula were found. In the SW corner an iron spearhead, in the NW corner small ceramic fragments, in the S corner fragments of a larger vessel, some animal bones, and a large iron knife. Around the pelvis several round iron fittings from the belt, at the left and right foot each three round bronze buttons with decorations on the front and a small round loop on the back. Around the grave a circular ditch about 70 cm wide with an outer diameter of 12.70 m.

Grave 3: rectangular, 190x220 cm large, with some post holes in the S. Inhumation burial in extended supine position, orientation S–N. To the southwest of the skull, an iron lance tip, around the neck a larger bronze necklace with plug-in closure, on both the right and left breasts a bronze fibula. On the left humerus a small bronze ring, a punched grinding stone, and a fragment of a knife; on the right forearm a bracelet with some slight knots and under the pubis a belt hook made of iron. On the right femur an iron sword and an iron scabbard, which has an eyelet and two iron rings on the backside. The handle of the sword was made of organic material, around it some convex iron rivets. Right under the sword the right finger bone with a small bronze ring with slightly overarched and widened ends. In the S corner a large vessel, to the west a flask bottle and an omphalos cup; a second, slightly smaller omphalos cup turned up to the west of it. In the north a larger knife made of iron with a solid handle. The entire east side of the tomb was covered with animal bone fragments. In the NE corner, an old broken-off part of a large clay bowl (Eibner 1981; Gattringer 1971; Urban 2012c).

Inzersdorf (INZ), distr. St. Pölten

Early La Tène grave group in the Lower Traisen valley with several circular and square grave gardens, which show entrances to the south several times. Approximately in the center of the enclosures, the broad rectangular grave pits are placed, in which mostly on the west side the S–N oriented skeletons lay. In the eastern half, most of the ceramic grave goods (fine wheel-turned and rather rough handmade graphite clayware) were laid. An exception is a round grave pit with the accumulation of two cremated individuals. In some grave shafts on both longitudinal walls two opposing post pits have been documented which could give an indication of a former wooden construction or protective structures. The finds of fibulae (type Certosa and type with bird head/*Vogelkopf*) as well as belt hooks with box-shaped fitting or open worked ornament and weapon finds (spear points) and big knives allow dating to LT A. The weapon finds of a warrior grave with a sword, spear point, and band-shaped shield buckle, which had been found about 100 meters away from the cemetery can be dated to the beginning of the middle La Tène period (Neugebauer 1996; Renhart 1996).

Kuffern (KUF), distr. St. Pölten

In the last decade of the 19th century, 14 early La Tène burials were uncovered. The excavations were carried out by Pater Lambert Karner, Prelate Adalbert Dungal, abbot of Göttweig Abbey, and Josef Szombathy (NHM Vienna). The probably loosely occupied burial ground, which has been researched only fragmentarily, is located on a slightly rising hill in front of the exit of the Meidlinger valley between the known Iron Age localities Statzendorf and Kuffern in the field area dubbed “Unter Feld”.

The *Situlengrab*, grave 1, was an inhumation burial. Next to the situla was a bronze ladle; the dipper is adorned with an omphalos with triangular trims on the inside and the long handle with a widespread end rolled up handle decorated with scalloped wavy lines. From the costume pieces only parts of a bow and head of a fibula type Certosa (?) have been found, along with remains of a bronze chain. The weapons include the remains of a scabbard, four lance tips, and two arrowheads. The highly fragmented remains of two hand-made graphite-clay vessels, a wheel-turned vessel, and a high quality bowl were also placed in the grave.

The conical situla has three circumferential zones, each separated by two ribs. The lower zone has juxtaposed fish bubble ornaments, and the narrow, middle zone has a strip of vertically adjacent ribs. The broad upper zone is figuratively decorated: in addition to a drinking scene and a fistfight-like competition is the contemporary representation of a chariot race. The four drivers – the first looks back – follow two riders. Between the riders and the boxing match a small figure and a cock are shown. The tombs date mostly to the early La Tène period. In tomb 8, next to an open worked belt hook, there is a fibula type Ostalpine Tierkopffibel; in grave 9 a pair of fibulae type Marzabotto; and in grave 2 is a grave with a sword equipped man (*Nebehay 1993*).

Leopoldau (LPD), distr. Wien XXII

In 1937, 13 LT A burials were excavated (9 inhumations, 4 cremations). Remarkable is a shoe-shaped fibula made of bronze from grave 8 and bowls of the Stupava type with handles and horn-shaped attachments (graves 2, 5, and 11). One bronze fibula, consisting of two parts, was decorated with two plastically made animal heads (dogs?), was a stray find (*Nebehay 1976*).

Mannersdorf am Leithagebirge I (MD I), distr. Bruck/Leitha

The first written reference to prehistoric finds in Mannersdorf am Leithagebirge can be found in a letter from 1879 by Mathias Kornmüller to the former director of the Anthropological-Ethnographic Department of the Museum of Natural History Vienna, Ferdinand von Hochstetter.

On December 4, 1905, an inhumation grave with grave goods was found at Gemeindeweide in the field Reinthal. The metal artefacts and a part of the pottery were deposited by the teacher Eduard Pretsch in his school and handed over to the curator of the Museum Carnuntinum, Josef Bortlik on December 21, 1905.

J. Bortlik published the find report in the same year. In November 1906, Oberlehrer E. Pretsch from Mannersdorf contacted again the k. k. Natural History Museum.

So 1905–1912 a total of 21 inhumation and cremation burials from the La Tène period were found at ground plot 1851. In the meantime, between 1905 and 1911 graves were repeatedly disclosed by sand mining. It was not until 1912 that official excavations were carried out on behalf of the k. k. Central Commission and the Lower Austrian Provincial Museum by Alexander von Seracin.

Next to burials with early La Tène fibulae, anklets, and bracelets, several graves with iron belt-chains and swords are remarkable, and show also tendencies associated with the LT C – that is, the middle La Tène period (*Bortlik 1906; Ramsel 2011; Seracin/Zehenthofer 1916*).

Mannersdorf am Leithagebirge II (MD II), distr. Bruck/Leitha

The necropolis is located on a gravel rib on the slope of the Leitha hills with an extent of 200 by 50 m. At the field area Reinthal from 1976 (out-plowed) to 1984 the Museum Mannersdorf (excavation leaders H. Schutzbier, F. Opferkuh) and the Federal Monuments Office (excavation leaders G. Melzer, G. Mossler, J.-W. Neugebauer) excavated graves of the early Bronze and late Bronze Age, discovering a total of 98 inhumation and cremation graves of the early and middle La Tène period. Parts of the burial pits were

surrounded by circular and square enclosures, sometimes several of them had grown into systems. In many cases, stone chambers were also observed.

Tombs 4 and 13 are the most well-known here.

Grave 4 is a inhumation burial of a 4–5 year-old girl; at the bottom (0.94 meters deep), there was a limestone packing in the 2.08 m long and 1.9 m wide burial chamber. Among the skeletal remains in the western part of the chamber, such grave goods came to light as jewelry accessories (brooches of the Duchcov and Münsingen type), beads made of amber and glass, a bear tooth, a lignite ring, and further finger-, arm- and footrings. At the vessels, a pot with a foot, a *Röhrenkanne*, and a flask bottle (*Linsenflasche*) stand out.

Tomb 13 contains an early adult woman. The burial is also characterized by exceptional opulence. In addition to a Münsinger fibula with several mask depictions, a necklace made of amber, glass, coral, and bronze, a bronze wheel, and a golden finger ring are to be mentioned. In addition, there are rich arm and leg jewellery and an Etruscan bronze situla with holders for two handles with ends in the shape of lotus flowers.

Other grave goods include two golden bracelets with granulation from grave 115 and an open worked, lance point from grave 180. An import from the south-east European area is the so-called *Omeganadel* of Illyrian-Hellenistic provenance from grave 76.

Regarding the gender distribution in the Mannersdorf II cemetery, the following should be noted. There are twice as many women (48) as men (24). If one looks at the exact distribution, in LT B1 there are 20 women and 7 men, and in LT B2 14 women and 9 men, and in LT C there are 12 women alone.

The analysis of stamp impressions on ceramics has revealed that pieces with identical impressions with s-shaped stamps occur at several localities. With the help of measurements of photos and impressions, it was proven that this is the same stamp. Also identical impressions of a fish-bubble-shaped (or better, comma-leaf shaped) stamp on ceramic in Mannersdorf II, grave 184, Sopron-Krautacker, Neunkirchen, grave 10 (originally mistakenly Vienna XIII [Rohrbacherstraße]), and Pottenbrunn, grave 1005 were found (Melzer 1984; Neugebauer 1991b; 1992; Ramsl 2002b; 2011).

Oberndorf (OBD), distr. St. Pölten

During the construction of the motorway exit Herzogenburg Süd, in a gravel pit south of it, 14 cremation graves of the Hallstatt culture were excavated in 1982/83, as well as 4 cremation and 18 inhumation burials of the early La Tène culture. On the large scale, we need mention only the partially excavated necropolis, several early La Tène warrior tombs and double burials (two women with necklaces with simple center knot decoration, clay situlae and an early flasks), and in one case even a quadruple burial (partly in square and circular surroundings).

In the inhumation grave of a woman, which overlaid a cremation burial of Hallstatt C, a ring costume (simple bracelets and massive ribbed anklets) and a Weidacher fibula with a drum-shaped foot decoration were found. This is one of the latest Hallstatt fibulae and is to be placed in Ha D3. Thus, a continuous occupancy of this site from the Hallstatt culture until the early La Tène period is suggested. In 1986, in the immediate vicinity of the cemetery in KG Unterradlberg, E. Wallner picked up a stray find of an iron linch-pin with bronze head decorated with a mask of LT A (Megaw/Megaw/Neugebauer 1989; Neugebauer 1988; 1992; Neugebauer/Gattringer 1982; Ramsl 2018b).

Ossarn (OSS), distr. St. Pölten

Large early La Tène cemetery on a lower terrace of the Traisen at the site “Langwiesfeld”, where over 25 inhumation burials are documented.

One grave (25/1963) was surrounded by one (or two?) circular trench(es). Otherwise mostly rectangular pits with south-north to SSW–NNO-oriented inhumation burials with ceramic vessels for food and drink gifts, placed next to the feet.

Remarkable is grave 17/1984 of a juvenile female: in the neck area was a twisted, old patched bronze torques with an iron ring clasp, a blue bead, and a bronze tube; in the pelvic area a zoomorphic belt hook with box-shaped application, finely decorated (three rows with S, tendril, and animal decor) between two decorative rivets; in the abdominal area a fine bronze wire fibula, above, in the chest area, a plastically figurative fibula with coral insets – a sphinx-shaped hybrid creature with human head, animal paws, and bird body.

On the head was a helmet with neck guard and animal ears; the bird's body has spirals at the shoulders. In addition to other costume components, a bronze finger ring was found on the right hand, and in the eastern half of the grave pit other grave goods like a finely decorated bowl with Omphalos, a large vessel with a cone neck and a bucket-shaped vessel, as well as a big iron knife. Animal bones are missing in this LT A burial complex – grave 17 (*Engelhardt 1969; 1976; Megaw/Megaw/Neugebauer 1989; Neugebauer 1992; Neugebauer/Gattringer 1984*).

Petronell-Carnuntum (P-C), distr. Hainburg

The seven excavated graves from Heideweg in 2003 form (next to a stray find in the area of the western burial ground – *Ramsl 2006*) the earliest evidence of La Tène graves in the area of Petronell-Carnuntum. Due to rescue excavation as a result of the construction of a family home in Heideweg, 140 graves from the Roman period and seven of the late early La Tène period were discovered in late autumn 2003 by the Department of Bodendenkmale of the Federal Monuments Office.

In the excavation team under the direction of Mag. Franz Sauer amongst others, Mag. Ursa Jarc and Vladimir Stachura took part; the human skeletons were analyzed by Dr. S. Renhart; and the animal bones of the food offerings by Dr. E. Pucher (NHM Vienna).

Part of the graves themselves were affected by (contemporary) robbery. Grave 7, 11, 45, and 89 had been moderately to severely discarded in various ways. Because of that, not only were grave goods and costume components lost, but so was information on the circumstances of their discovery.

Remarkable is grave 7 with an inhumation and a cremation burial. We can mention the following about the armament: In grave 7 a lance point and fragments of a scabbard were found, in grave 11 a lance shoe and (presumably) the fragments of a scabbard. Grave 35 completely preserved a lance point and sword inside the scabbard, and grave 84 contains a lance tip, fragments of a scabbard, and parts of a shield rim. Thus, all four burials seem to have been given swords and lances, but only grave 84 also contains evidence of a shield.

The orientation of the burials with the head approximately to the south and the feet to the north corresponds to what was usual for eastern Austria in the early La Tène Period (e.g., Pottenbrunn, Mannersdorf, Au am Leithaberge).

Furthermore, it is remarkable that in this section of the (certainly larger) cemetery – with the exception of the child's grave, where the sex is not determinable – we have only biologically male burials. In addition, weapons are present in four graves, which represents a very high percentage. Obviously, it was none other than a group of armed men that was caught in this excavation area.

Inside the tombs, it should be noted that the ceramic vessels were placed exclusively on the right side of the burials. Also animal bones as remainders of food offerings are to be found in this zone. Surprising is the special situation of some weapons, such as the sword in the chest area of burial in grave 35 or the lance point at the feet of the burial in grave 7. The grave goods can be chronologically placed in LT B2 (with a view to LT C).

The group of burials in Petronell, together with the burial grounds of the Leitha hills, is a very succinct link between the necropolises of the Lower Austrian Traisen Valley and the numerous cemeteries of south-western Slovakia (*Ramsl 2006; 2016*).

Pottenbrunn (POT), distr. St. Pölten

The cemetery was excavated – after a few grave finds in 1930 – especially in 1981 and 1982 by the Federal Monuments Office (excavation management J.-W. Neugebauer). The necropolis is located on a gravel ridge in the river valley on the right bank of the Traisen and consists of a total of 42 grave structures with 45 burials, i.e., three are designated as double burials.

Twelve of the burials are in the cremation rite; two cremated remains were deposited in urns, the rest were scattered. In several cases it appears that the remains were buried in organic containers. The other graves are inhumation burials.

In the evidence, the numerous grave enclosures, also contiguous, concentric enclosures (single or double; sometimes with entrances) are remarkable. They may have been constructed after several tombs were built, some of them as demarcation (fences) of tumuli piles. Possible 'cult buildings' with deformed weapon parts and houses of dead directly above the burials also occur. In addition to obvi-

ous robberies, 'regular' subsequent interventions, depositions, and secondary burials must be distinguished.

Amongst the numerous grave goods of the individual tombs, some grave goods and combinations of them are particularly noteworthy: the silver-plated hollow bead with loop-in-loop chain from grave 54 is one of the examples of technology transfer or direct imports from Mediterranean areas, most likely from northern Italy. The combination of the decoration of the metal bead and chain clearly shows the connection of Greek-Etrurian metal processing technology with Celtic art style.

Grave 48 contains the equipment of a craftsman (artisan). Due to the attached tools, both leather-, wood- and metal-processing are suggested. In the ornaments of the various objects we can see various forms of early style, represented e.g., in the form of a palmette frieze on a clay pot, and especially the Waldalgesheim style on ceramics, as well as on iron and bronze objects.

In the developed phase of the cemetery its manifestations also appear in the plastic style. In the art historical analysis of the open worked iron mouth of the sword from grave 562, the transition from the Waldalgesheim style to the eastern sword style in its first form was recorded. This shows up as a technical variant that should be ascribed to the eastern sword style.

Seen in a horizontally stratigraphically way, the occupation begins in the south of the site with two tombs of the level Ha B/C and Ha C. Thereafter, maybe a time gap can be observed. The 'new start' begins with the initial phase of the La Tène culture, which then turns into a solid LT A. A dense sequence of tombs of the subphases LT B1a and LT B1b follows. Finally, there are tombs of LT B2a and b with richly decorated examples of the plastic style. The transition to LT C1 is strongly emphasized.

The youngest tomb contains a fibula with middle La Tène construction. The analysis of the gender distribution in the northern part of the necropolis shows, at first, a group of women, which also has a concise or simultaneous sequence in the relative chronology. This may indicate a horizontal structure within the hierarchy of Celtic society. To the east, a group of men with similar grave architecture, rite, and costume is connected.

Particularly noteworthy is the grave of a woman (no. 1003) on the northeastern edge of the cemetery, which, in contrast to the other graves, is NW–SO oriented, and has a lack of ceramics and bracelets and anklets with stamp-shaped ends and deltoidal ornamentation of double strokes with internal hatching. Such bracelets with stamp-shaped ends and similar ornamentation occur mainly in north-alpine Switzerland, occasionally in northern Bavaria, and with a focus on the area of today's Czech Republic.

When looking at the costumes of those buried in this necropolis, in comparison with other analyzed cemeteries (e.g., Münsingen-Rain), certain groups in Pottenbrunn cannot be discerned, which indicates the particularity of this area.

In Pottenbrunn, a part of the highest social class of a part of the Traisental was buried. This is shown, e.g., in grave 520, where probably a ('proto') Druid was buried. Among other burials, one probably indicates a craftsman (that profession enjoyed a great reputation in the Iron Age), and its large number of sword tombs points to the social upper class.

The graves reflect the influences, connections, and fashion trends over the entire early La Tène period: from the initial phase, which was still strongly influenced by the Hallstatt culture, to a strong western influence, which possibly had a certain population increase, to the economic and social consolidation at the end of the early La Tène period. This prosperity created its own expression of handcrafts, and had effects on the surrounding regions. There are overlaps with neighboring regions, which are characterized by different forms such as the fibulae of the variant Pottenbrunn – Horný Jatov, eastern sword style, or scabbard ends of the type Kosd D. The varying phases of the cemetery reveal examples of connection to different areas of Europe. This reflects the genesis of the La Tène culture in its various forms (*Herdits/Ramsl 1998a; 1998b; Neugebauer 1991a; 1992; Neugebauer/Ramsl 1998; Ramsl 2002a*).

Rassing (RASS), distr. St. Pölten

The cemetery is located in the flood plain of the Perschling, near the banks of today's river, about 0.5 km south of the village Rassing. In 2003 three flat graves and three tumuli of the early La Tène period were discovered on the area.

The state of preservation of the tumuli is surprisingly good, at least in the lower levels, as all three hills have been conserved at their base above the level of the burial chambers by a clay layer later deposited.

The burial chamber of tumulus 1 was placed on the ancient surface; above it, the hill pile was thrown up.

In addition to the very poorly preserved remains of a probable male, the chamber contained a large vessel, a flask (*Linsenflasche*), two small bowls, a big knife, a bronze ring, an iron belt hook with box-shaped fitting, an iron spearhead, an iron sword, and a bronze and an iron fibula.

Especially the bronze fibula, an early variant of the Dux type, suggests a date of the tomb in La Tène B1.

Tumulus 2 had a surrounding ditch – probably the foundation trench of a tumulus in the sense of a Krepiš limiting fence – with a diameter of about 14 m. This gives a good indication of the original size of the tumulus.

The chamber of tumulus 3, which was located only by the arrangement of the grave goods, may well have been robbed in ancient times, as indicated by the strong displacement of most of the grave goods.

It also contained a large vessel, a situla-shaped vessel, two bowls, and another, completely shattered vessel, two iron spearheads, two iron rings, an iron knife, and an iron fibula and a bronze brooch with bird's head, which indicates a date of the burial in La Tène A2. From the corpse itself, no remains have survived, which is probably due mainly to the poor soil conditions and less on ancient robbery. Grave 6 was a burial with small remains of cremations, (animal) bones and three ceramics (a large vessel, a bowl, and a flask [*Linsenflasche*]).

In 2004, another four inhumation burials in flat graves were documented. Found in a grave shaft was a child buried with a large vessel, two iron bracelets, and a belt hook. The second, already very strongly disturbed inhumation burial had as grave goods a large vessel, a bowl, three bronze fibulae, two bronze and two iron bracelets, a bronze and an iron necklace, and several smaller iron objects. In the third grave was the double burial of a woman and a child. Aside from several ceramic vessels, the adult woman's accessory included a necklace and two bracelets and a bronze finger ring, while the child's costume consisted of an iron necklace, two brooches, and a bronze finger-ring. In addition, deposited in the burial chamber were also a spin whorl, an iron awl with bone handle, as well as several small iron objects and animal bones.

In the fourth grave the burial of an adult man was placed with a large vessel, a bronze fibula, a belt hook, and an iron knife and animal bones. Especially due to the fibulae all graves can be dated within the horizon LT A2/LT B1. In the immediate vicinity of the graves five post holes were documented, ones which could be remnants of funeral constructions. Since there were no more burials in the greater radius of the graves, it can be assumed that it was actually a small, closed grave group (*Preinfalk 2005*).

Walpersdorf (WALP), distr. St. Pölten

By the use of aerial archaeology, clear evidence was given beginning in 1981 of the presence of pre-historic objects, especially graves, in an area of about 5 hectares west of street no. 113, both in the KG Walpersdorf and in the KG Inzersdorf. Before the start of construction, between October 9 and December 12, 1997, the first part was systematically excavated for a section of around 15,000 m². The focus was on a portion of a huge burial site of late Hallstatt or the beginning La Tène culture (500–300 BC), probably one of the largest cemeteries of that time anywhere in Austria. The numerous inhumation and cremation burials, which were mostly surrounded by circular or square burial gardens, were furnished with various offerings, and in spite of strong contemporary grave robbing, still contained pottery for food and drinks, as well as brooches, rings, belt fittings, and weapons made of bronze and iron.

In 1998, the excavations were continued. Nine early La Tène inhumations and eight cremations were found, consisting of seven urn graves and one scattered cremation burial. Some were surrounded by six circular and three square burial gardens.

In particular the early La Tène period burials were – in spite of various secondary interventions – still very rich, equipped as they were with bronze and iron objects and ceramics. They are part of a huge Iron Age necropolis with a north–south extension of homesteads along the edge of the western low terrace of the Traisen. They are correspondingly structured in necropolises/cemeteries which were spatially shifted from the edge of a terrace inside to the land (*Neugebauer 1997; 1999*).

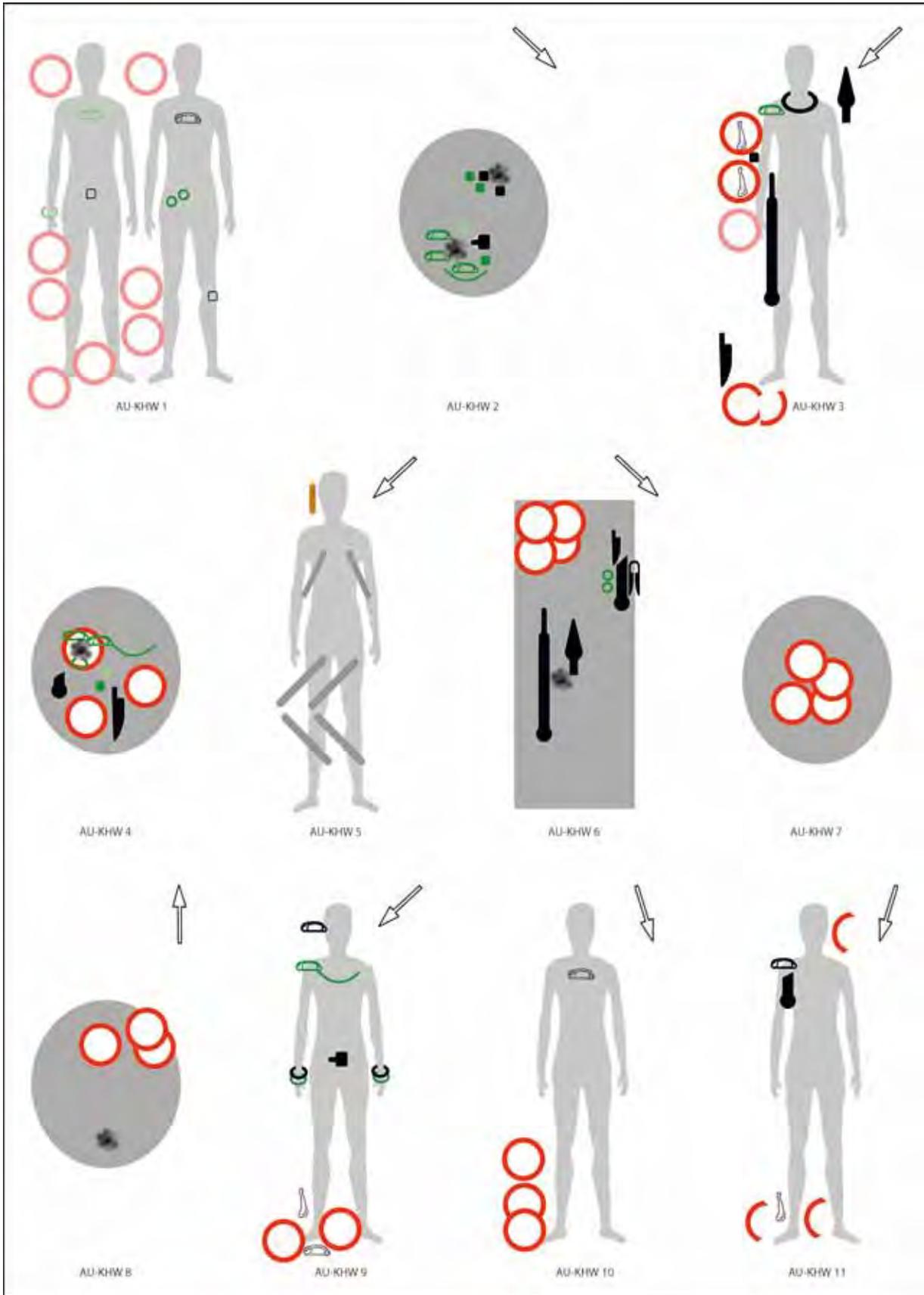


Fig. 13. Schematic graphics of the burials in Austria.

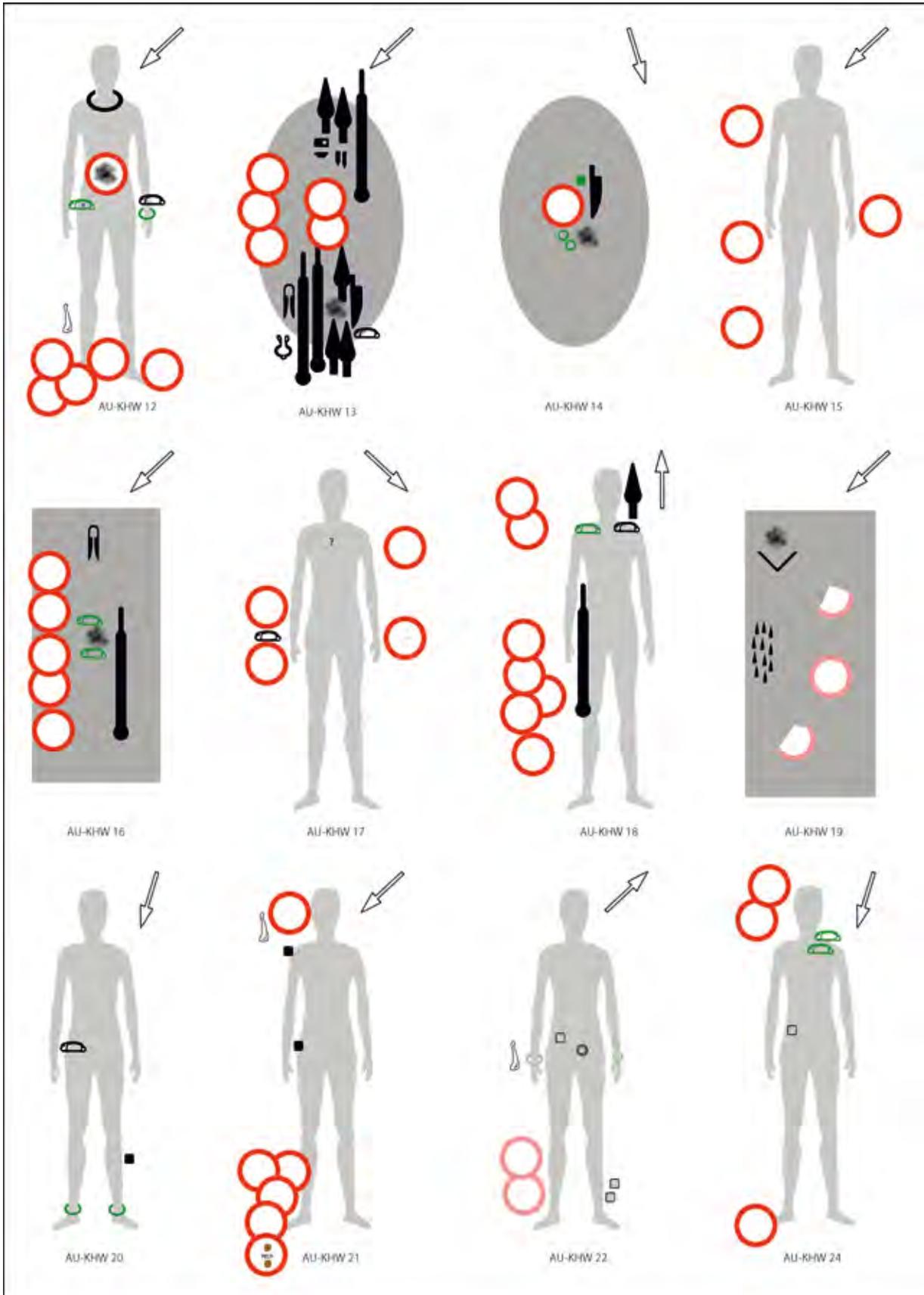


Fig. 13. Continuation.

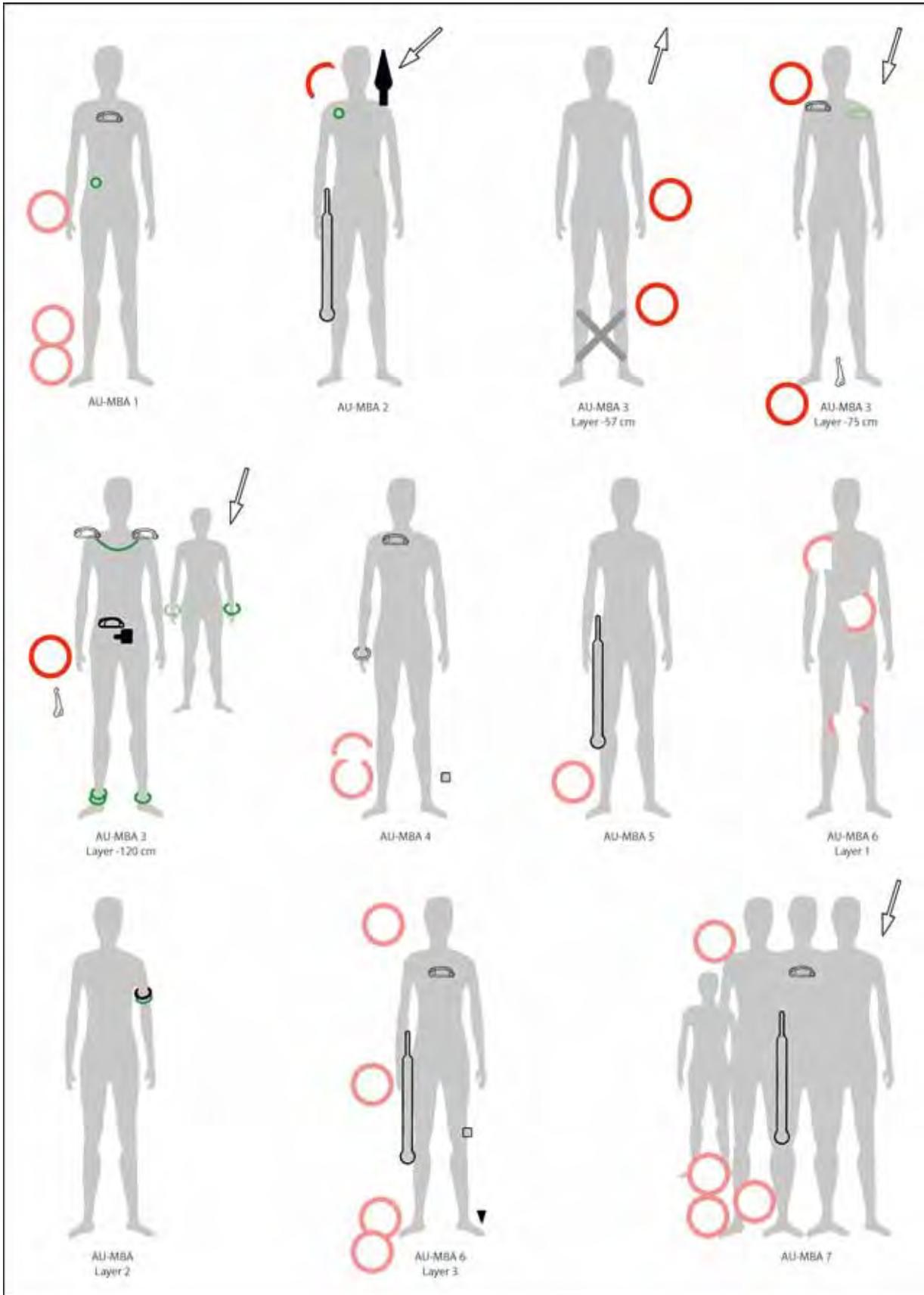


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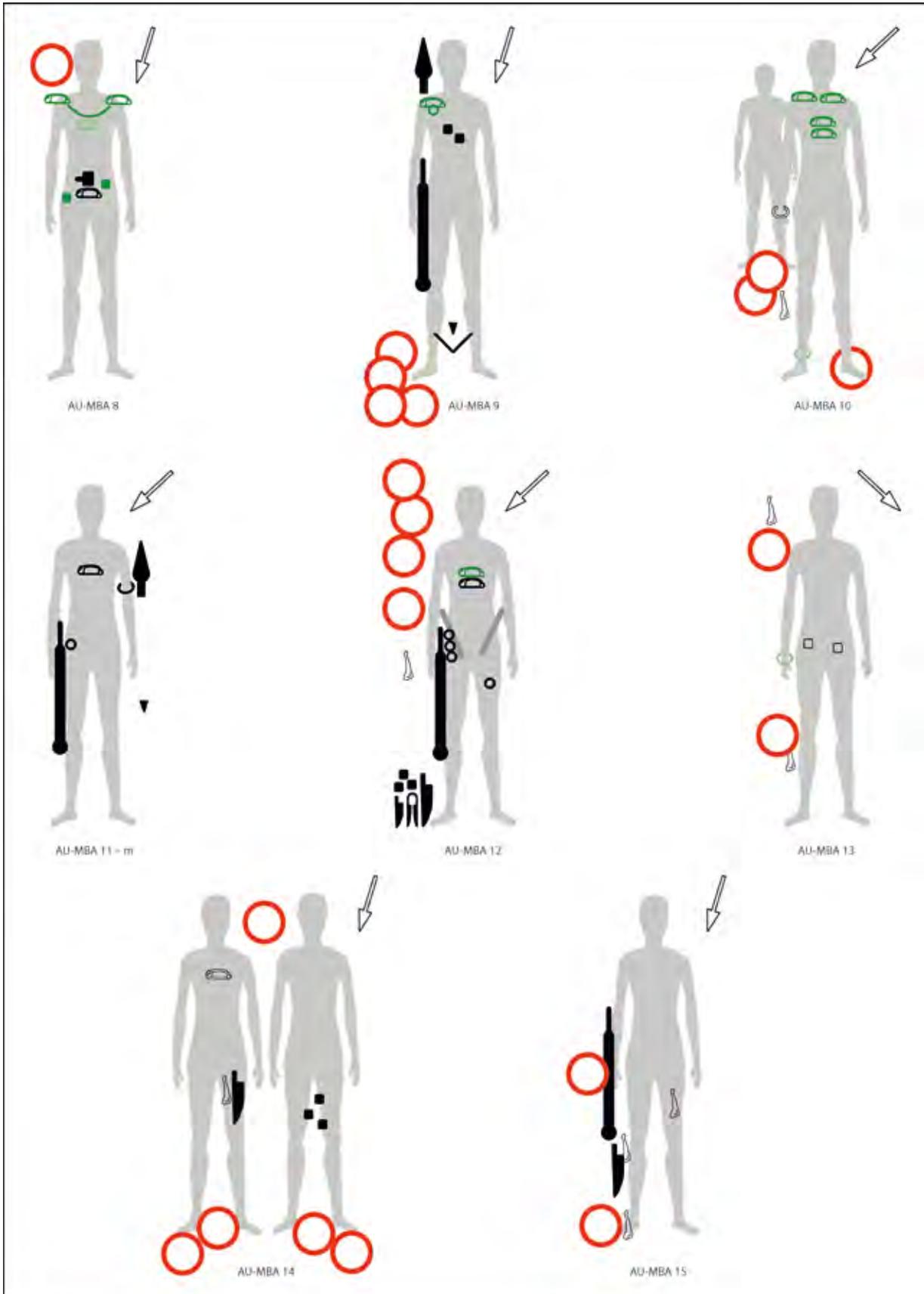


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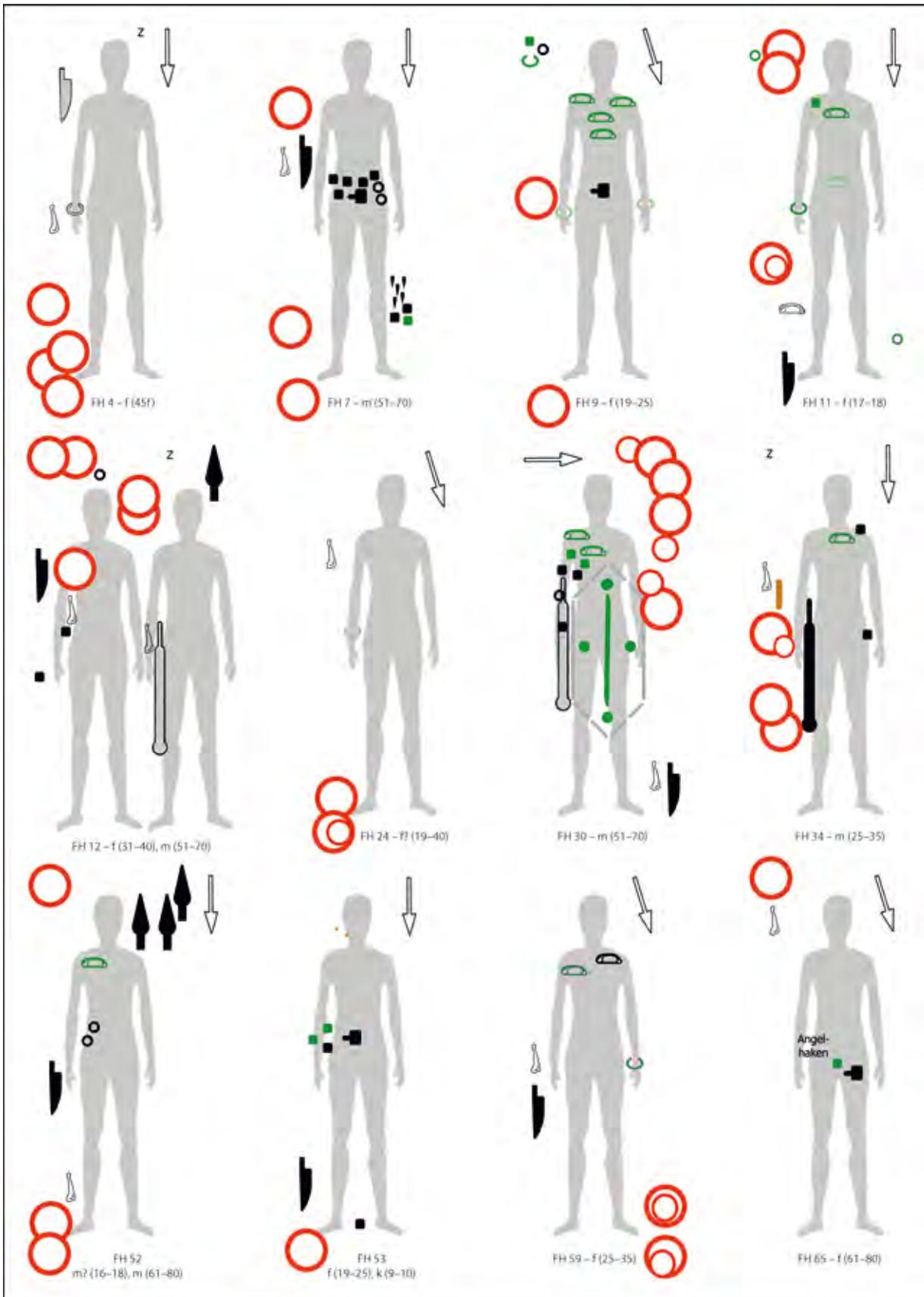


Fig. 13. Continuation (FH 52; 53 – skeletal remains of the second individual were present in the graves).

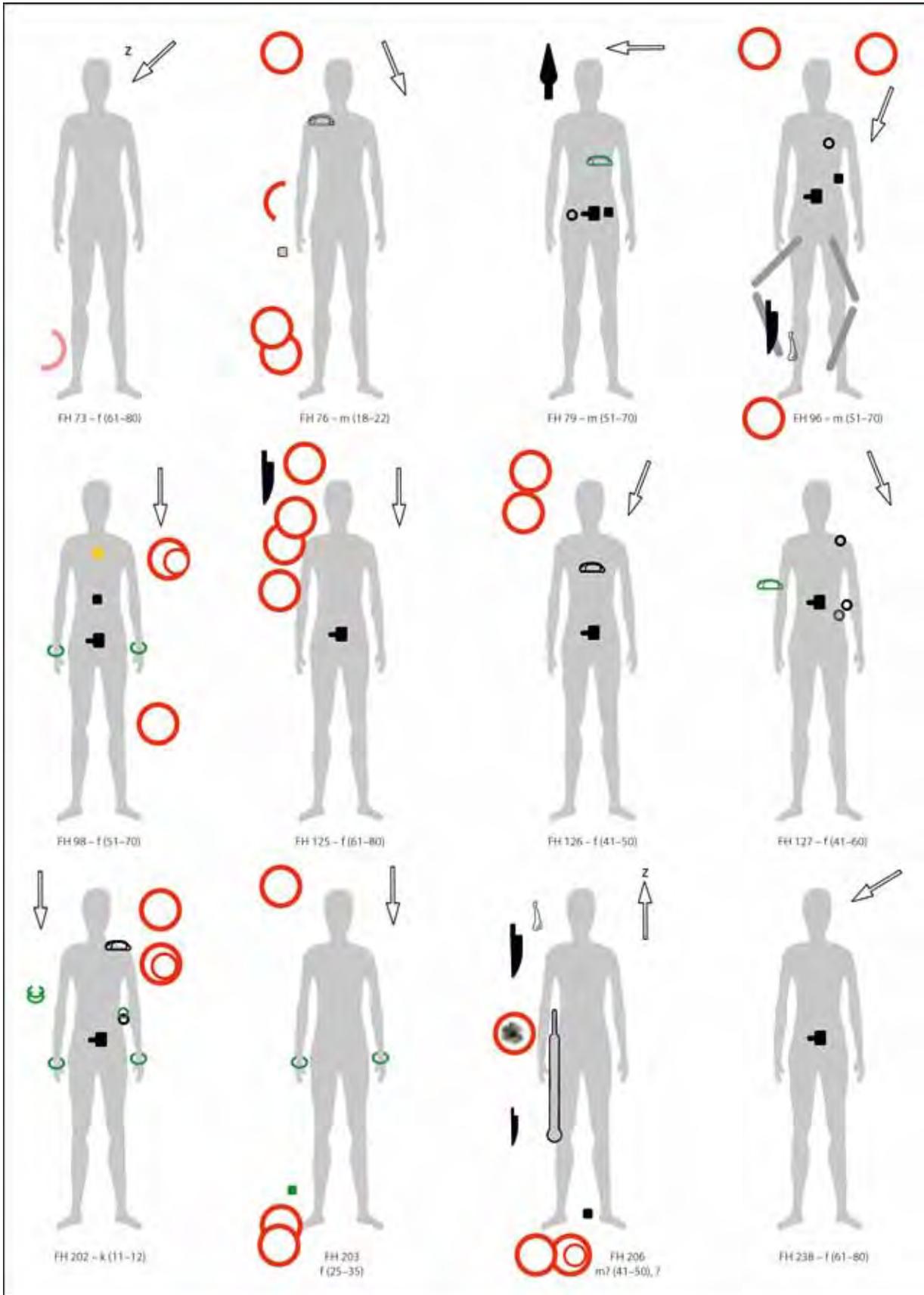


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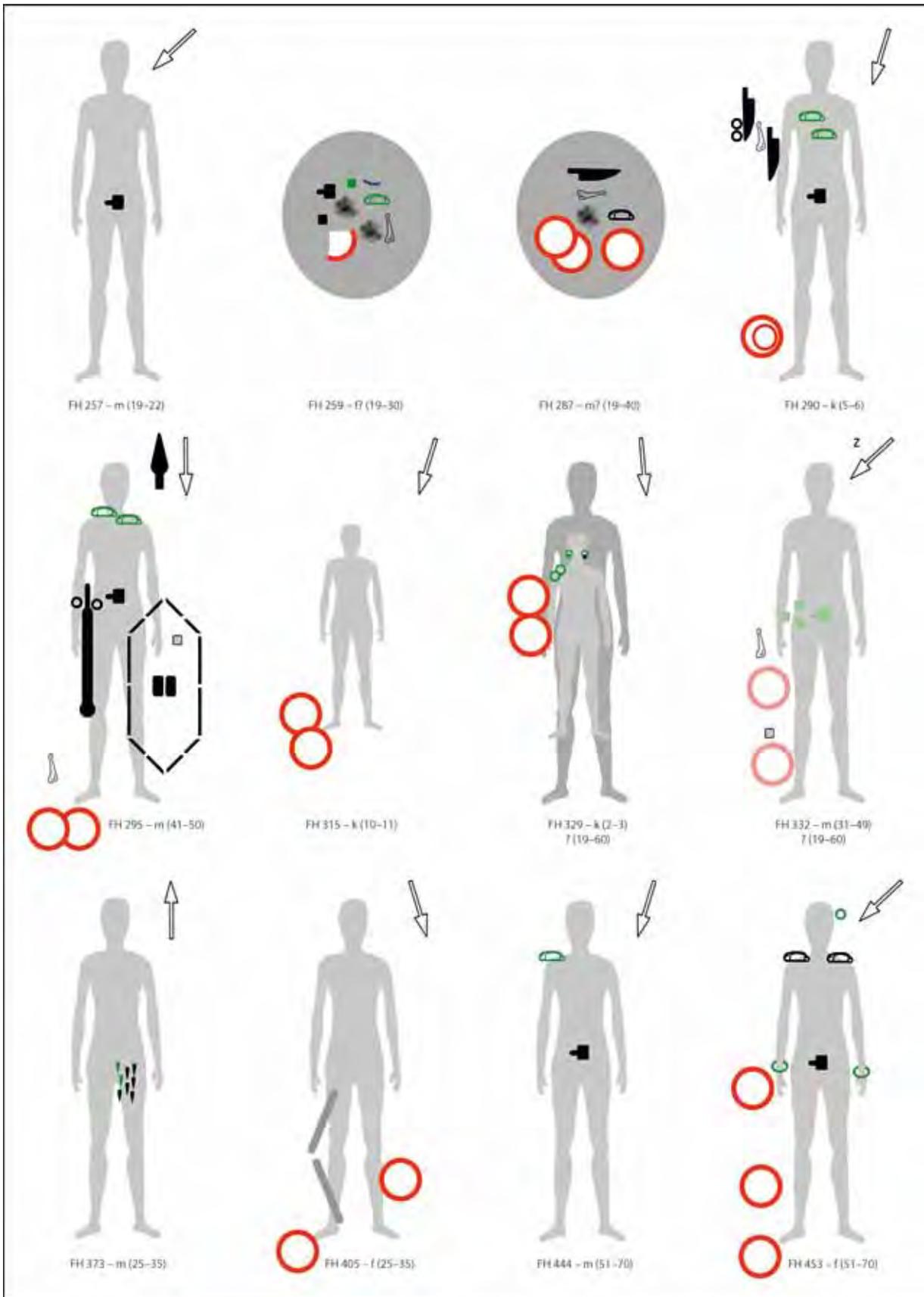


Fig. 13. Continuation (FH 332 – skeletal remains of the second individual were present in the grave).

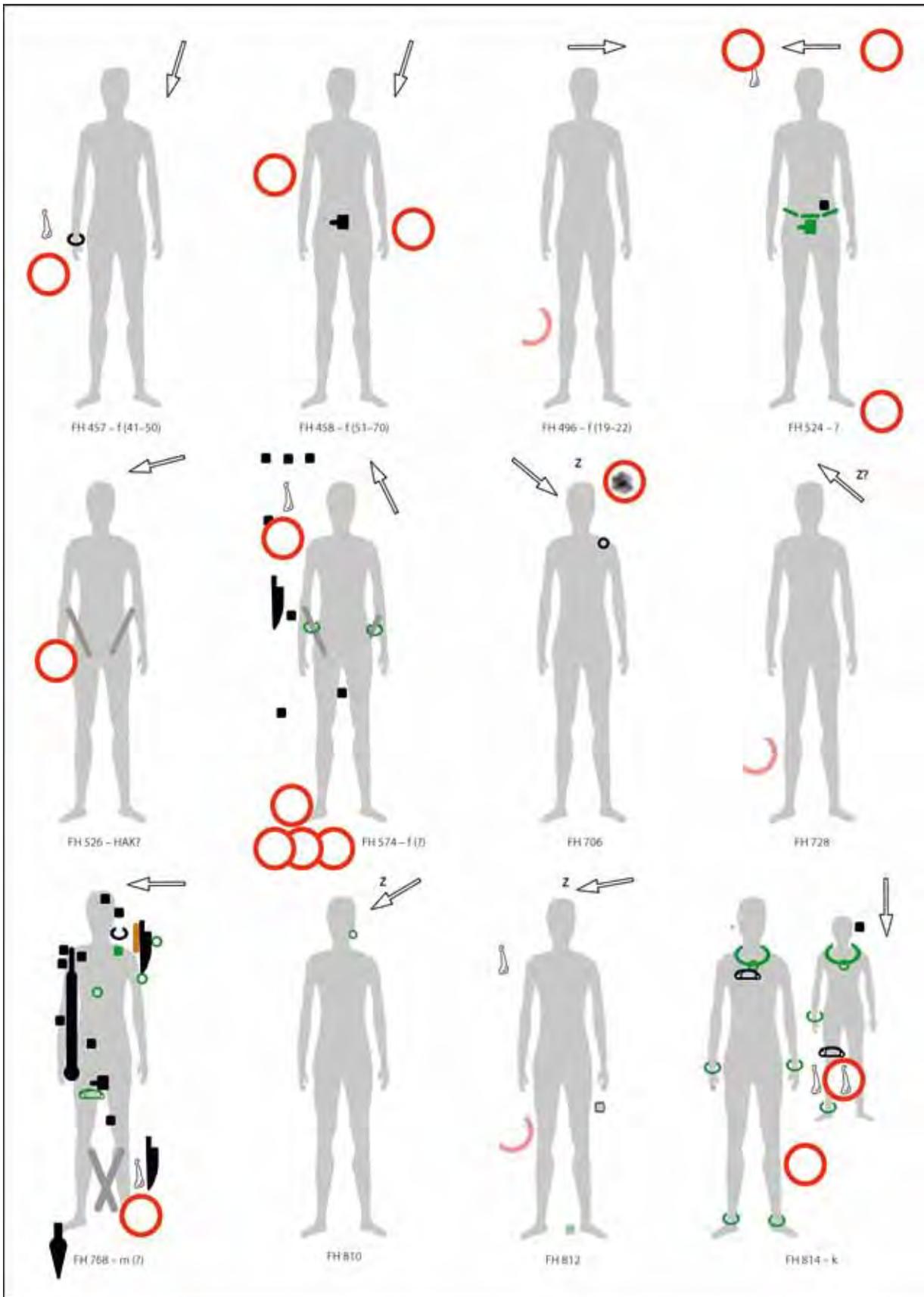


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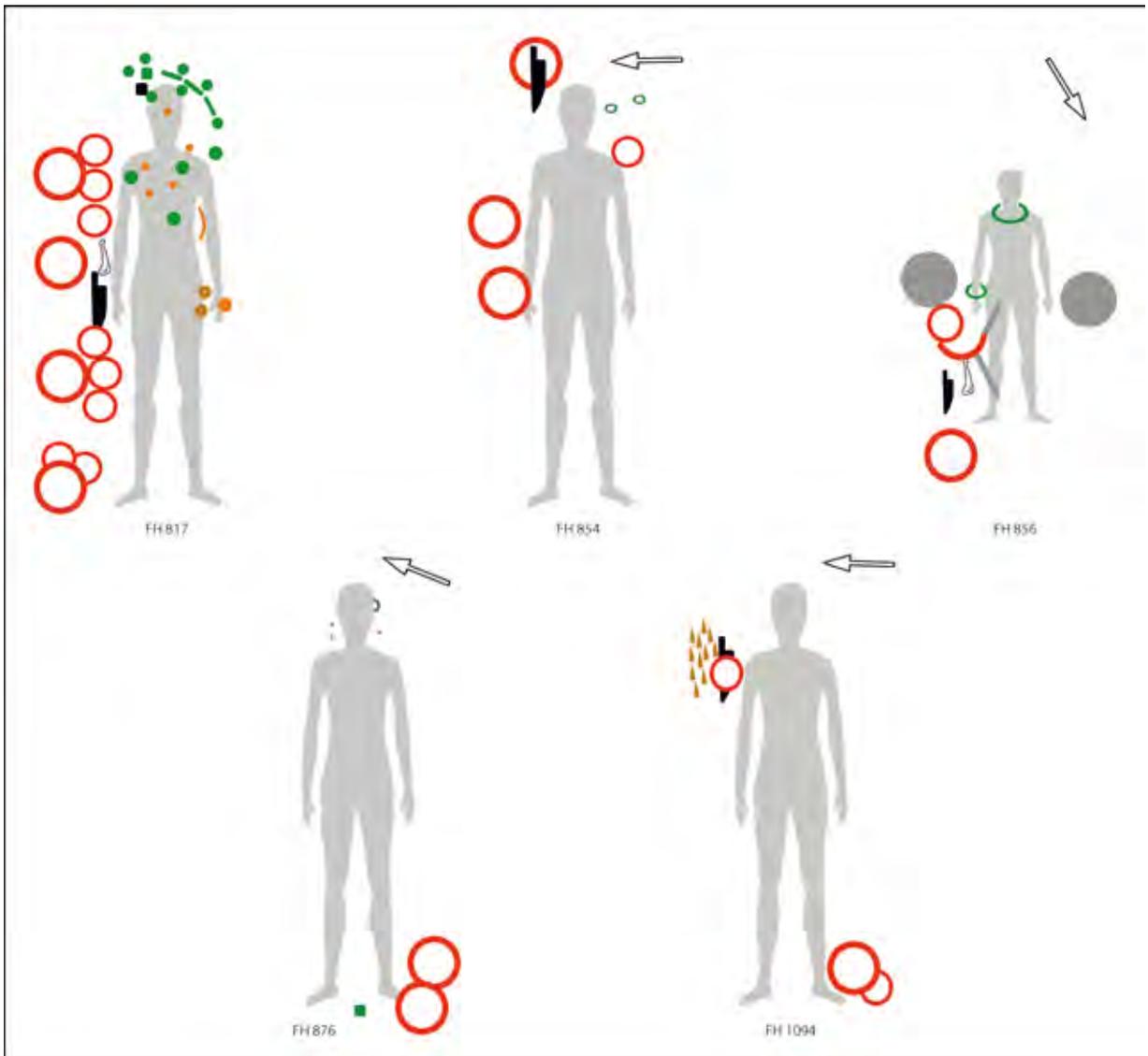


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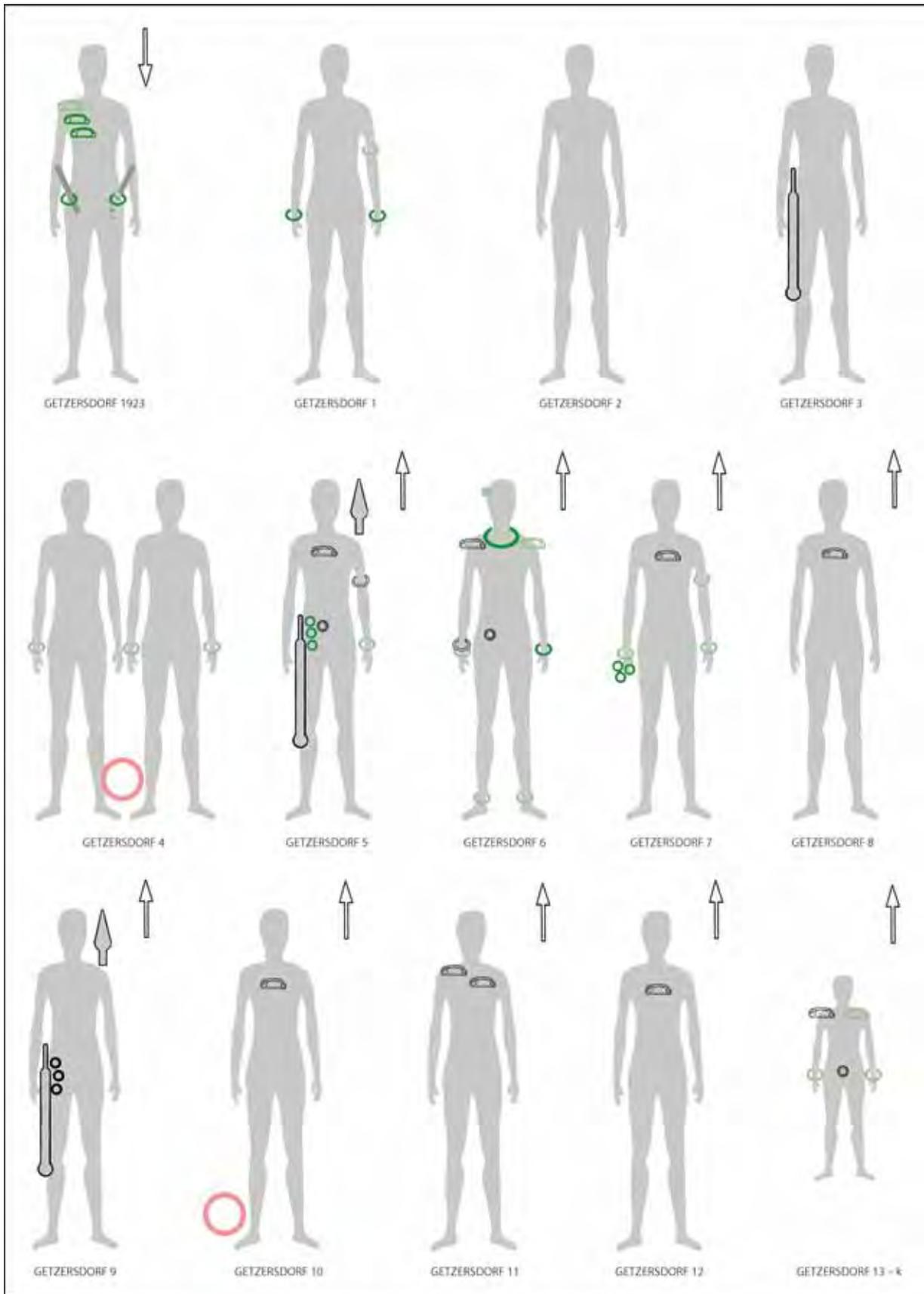


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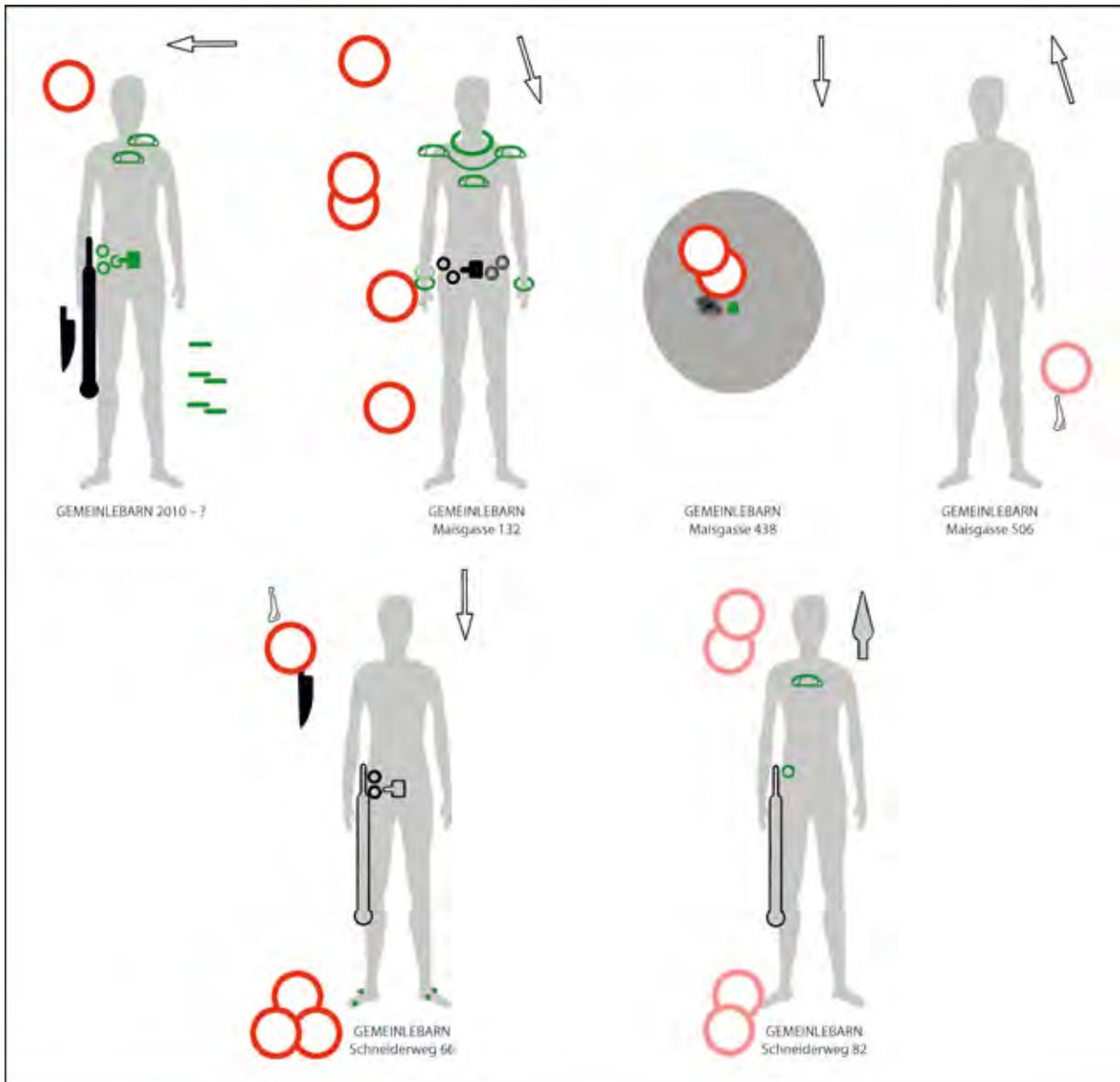


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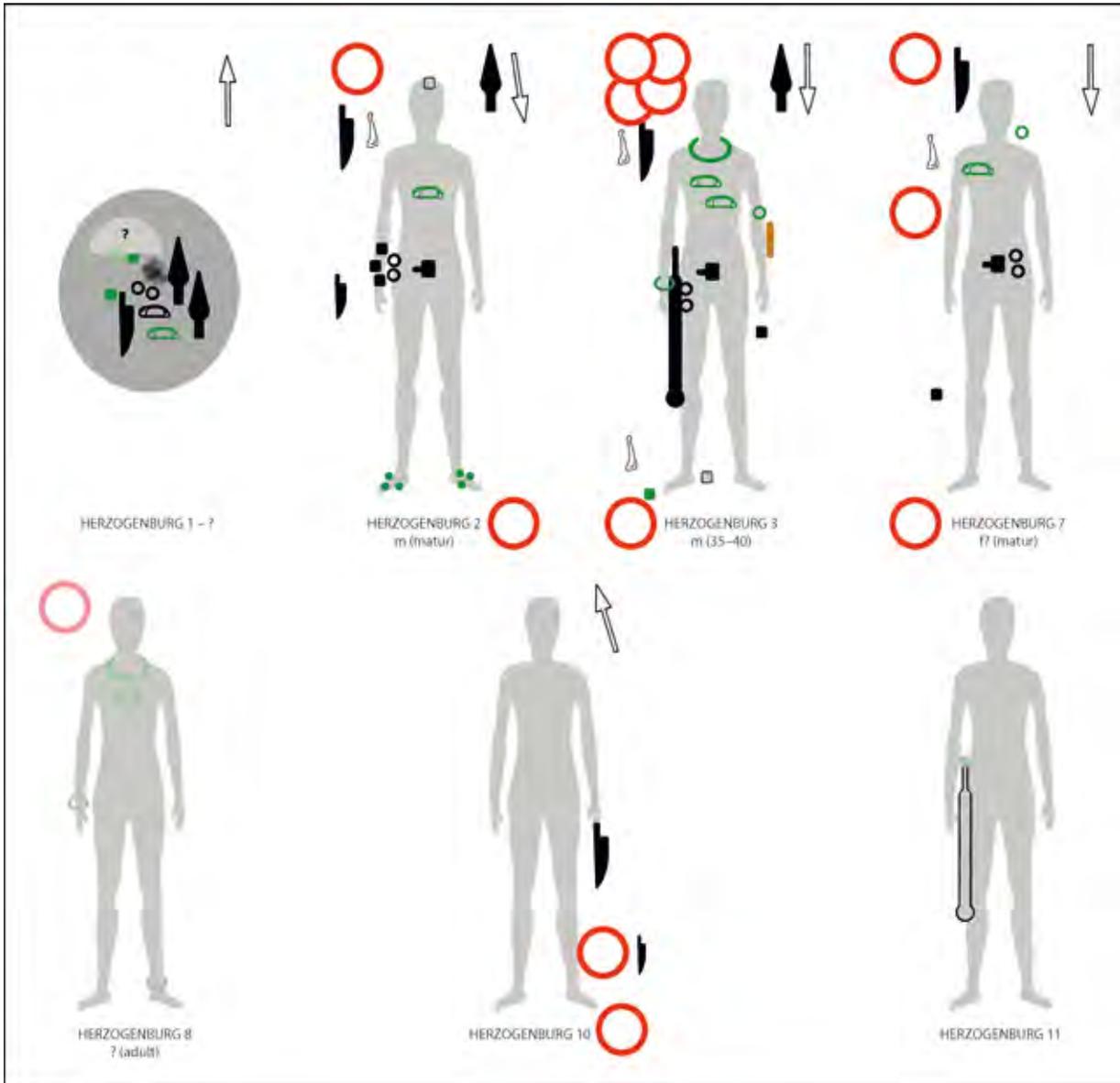


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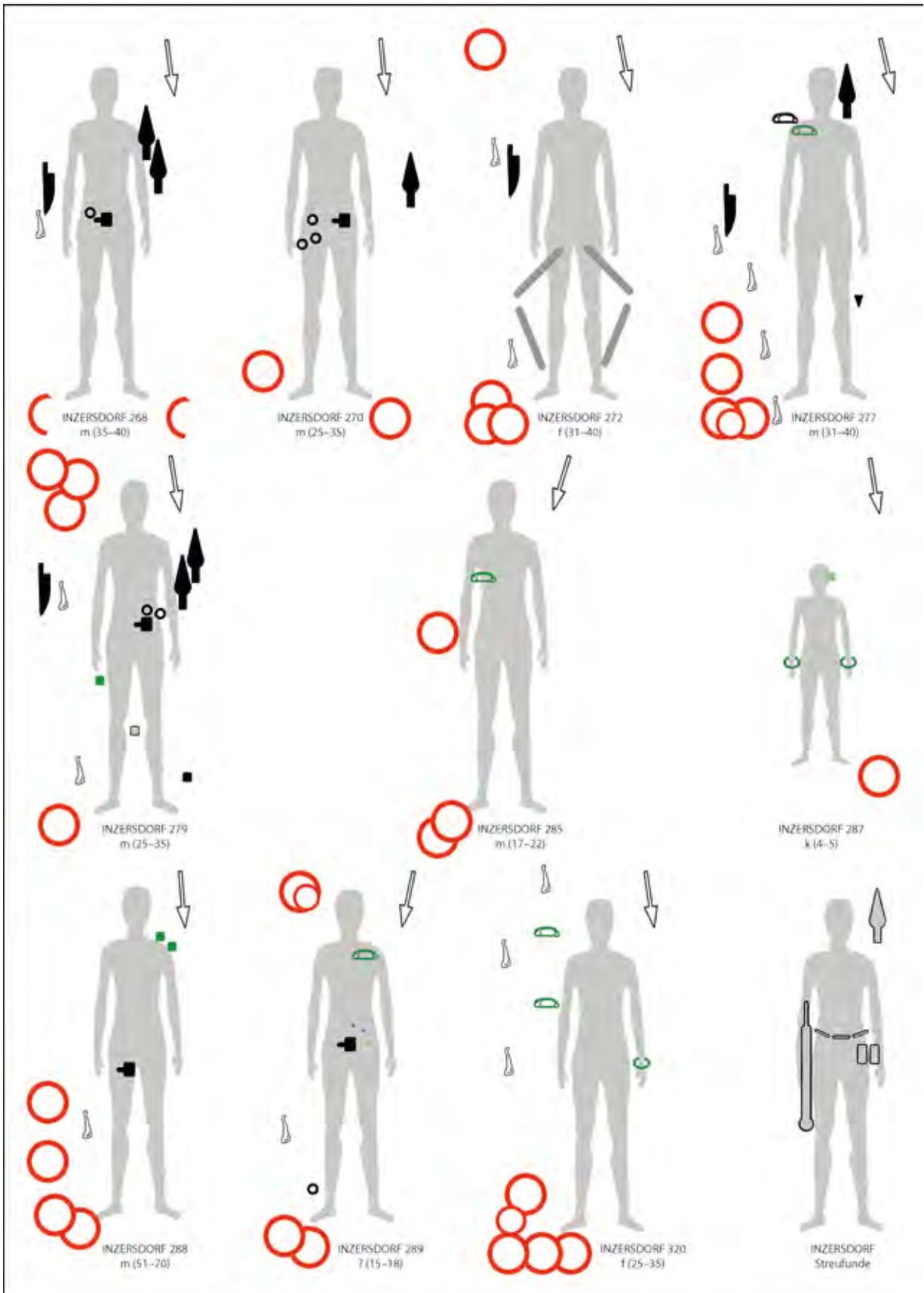


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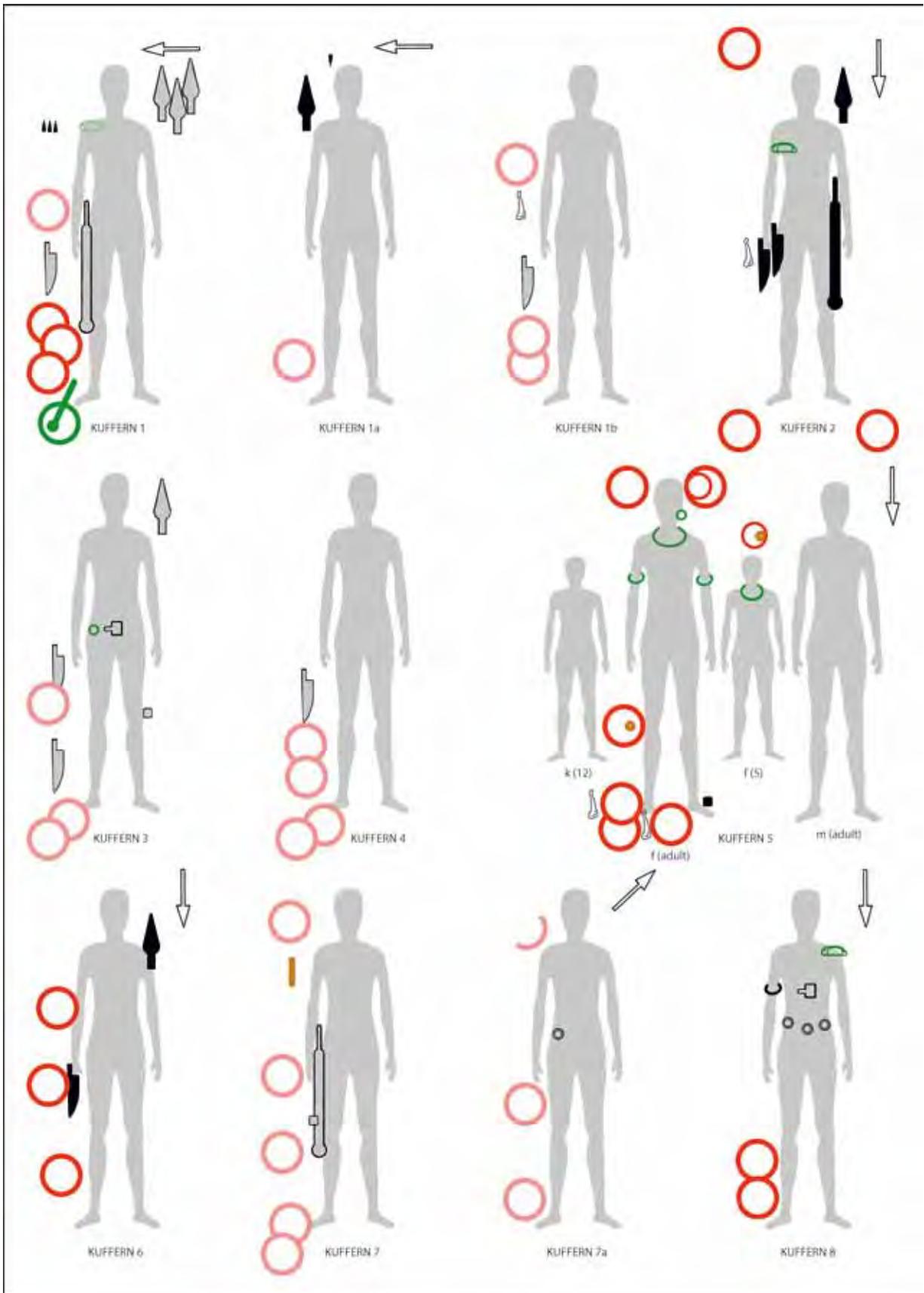


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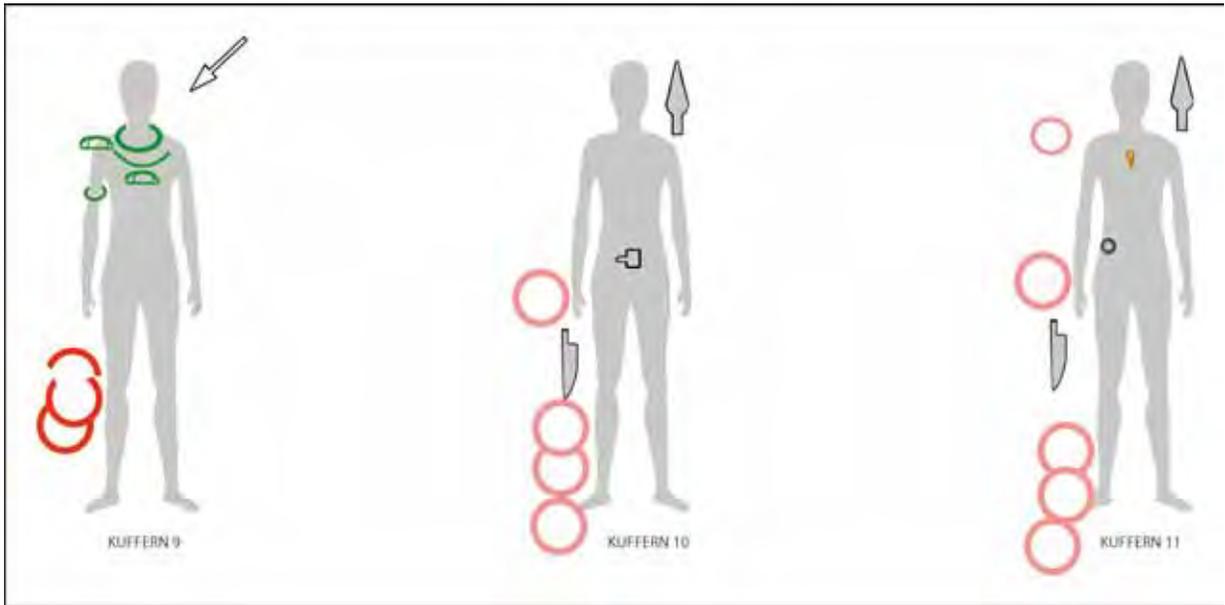


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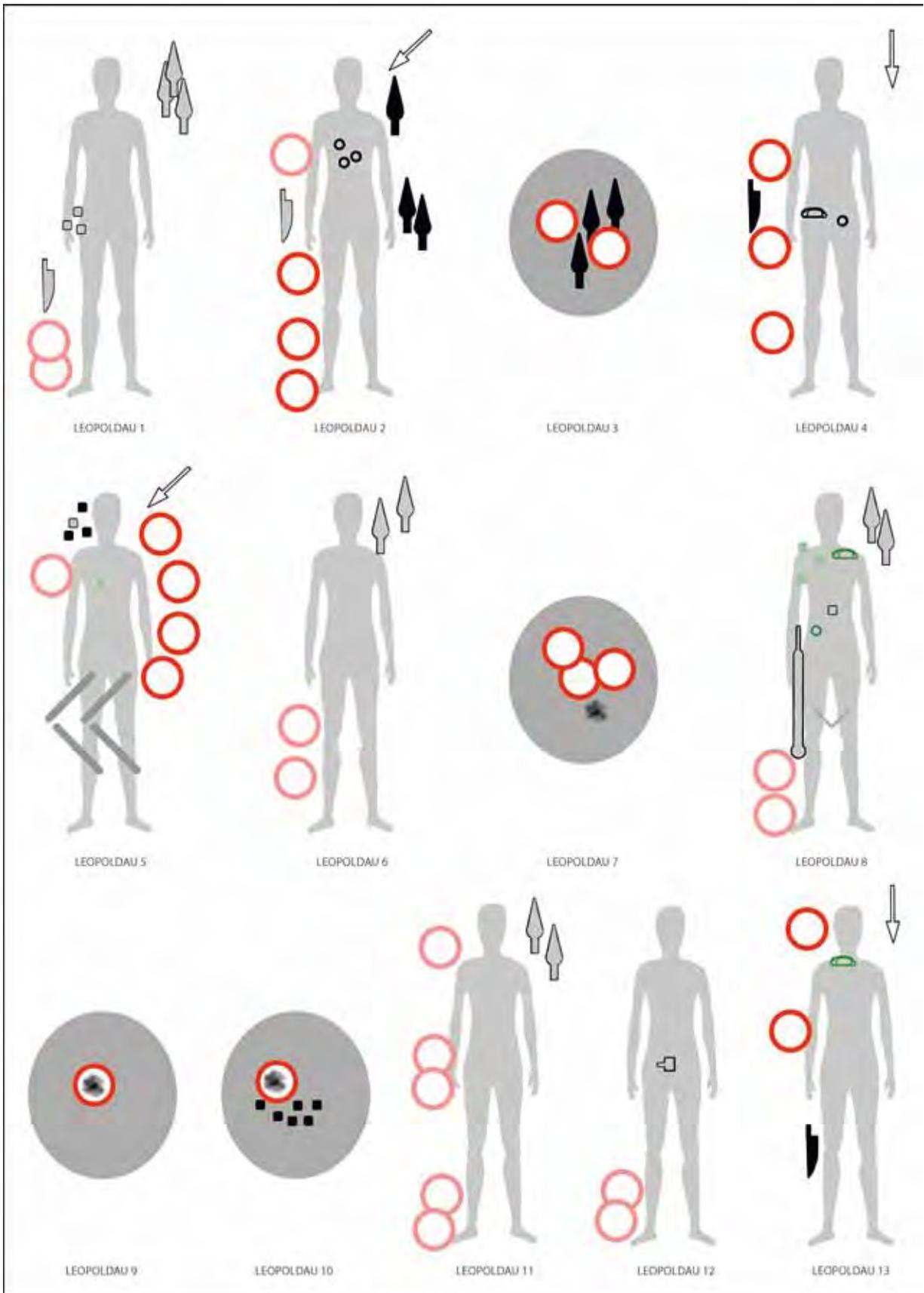


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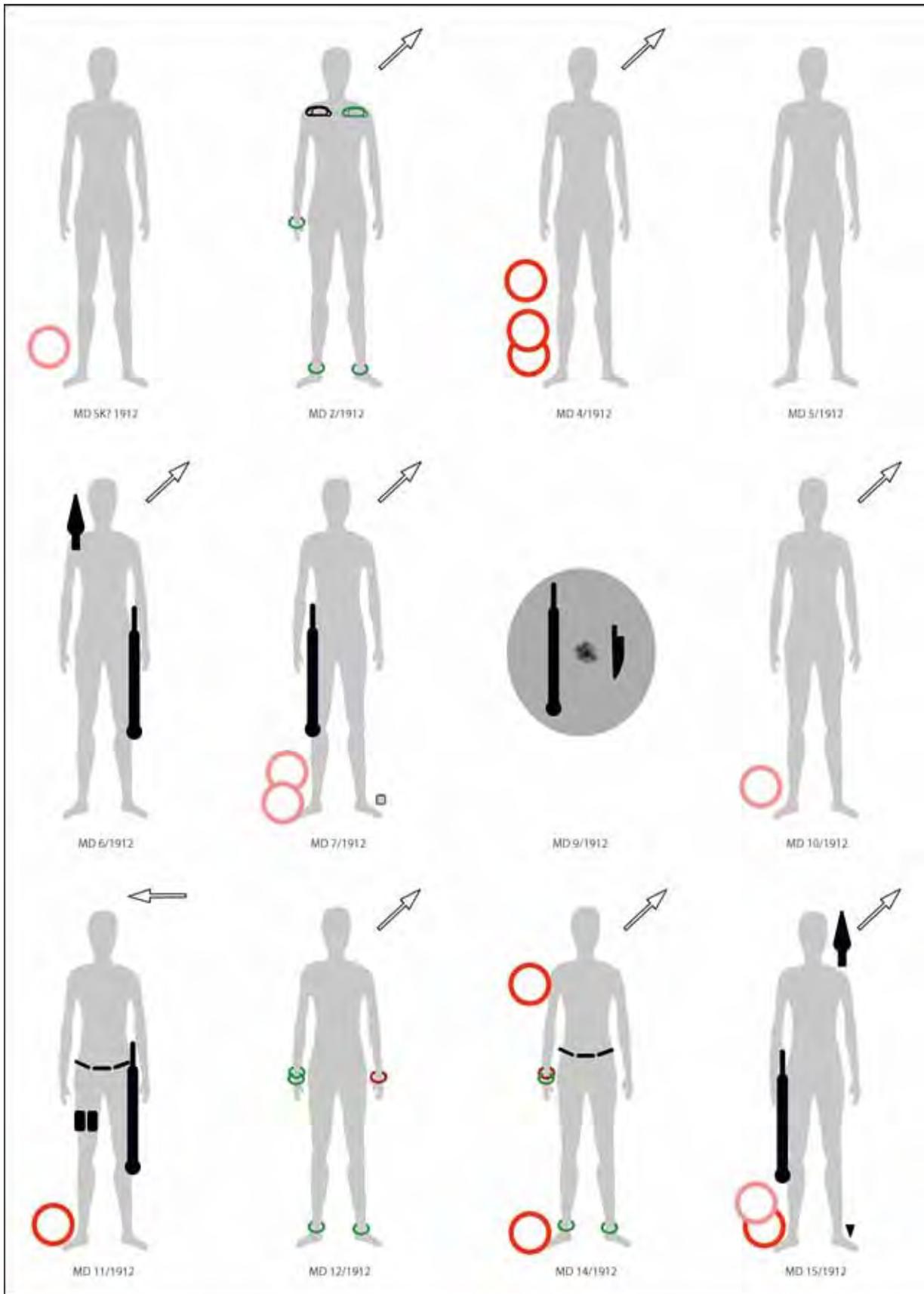


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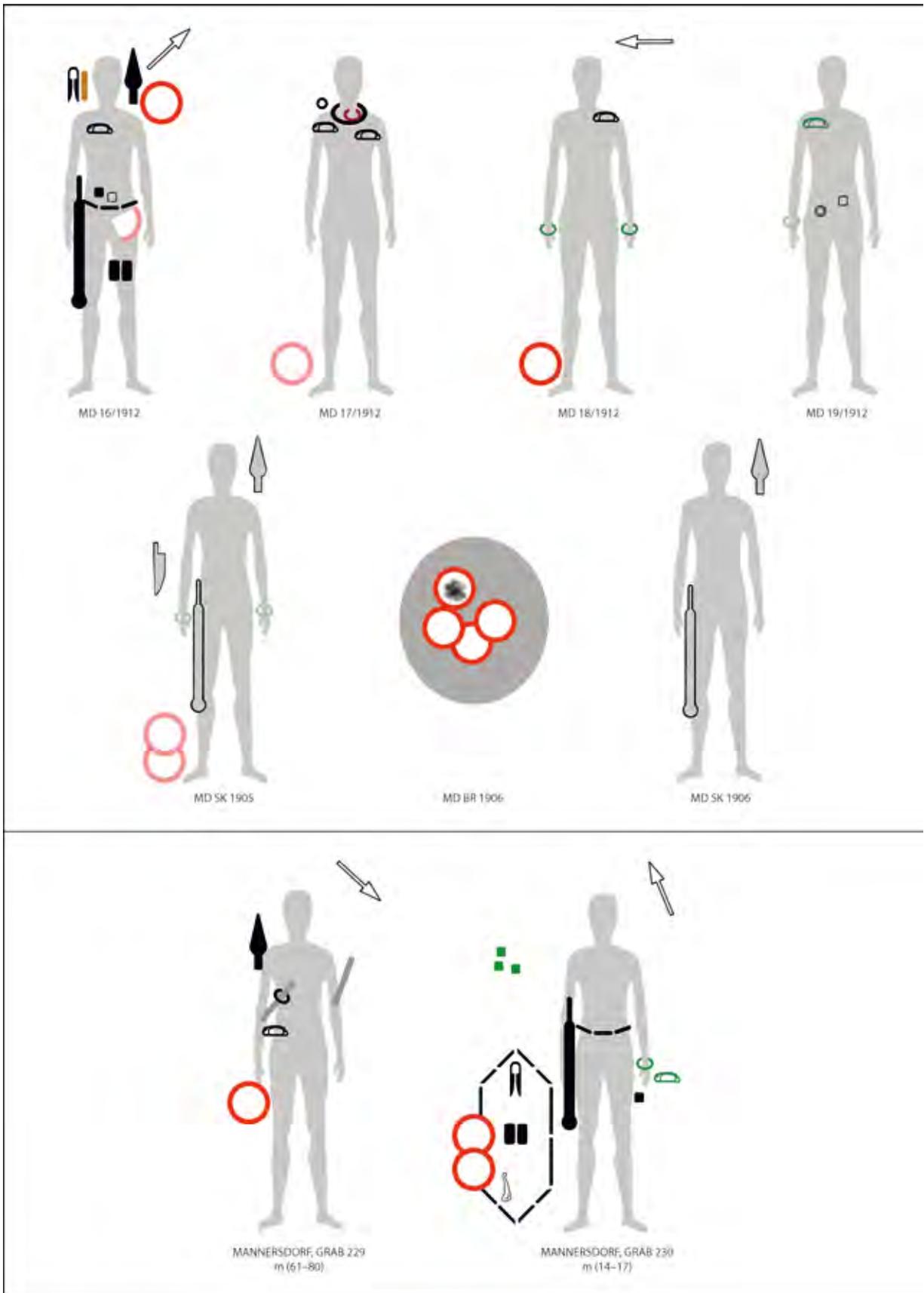


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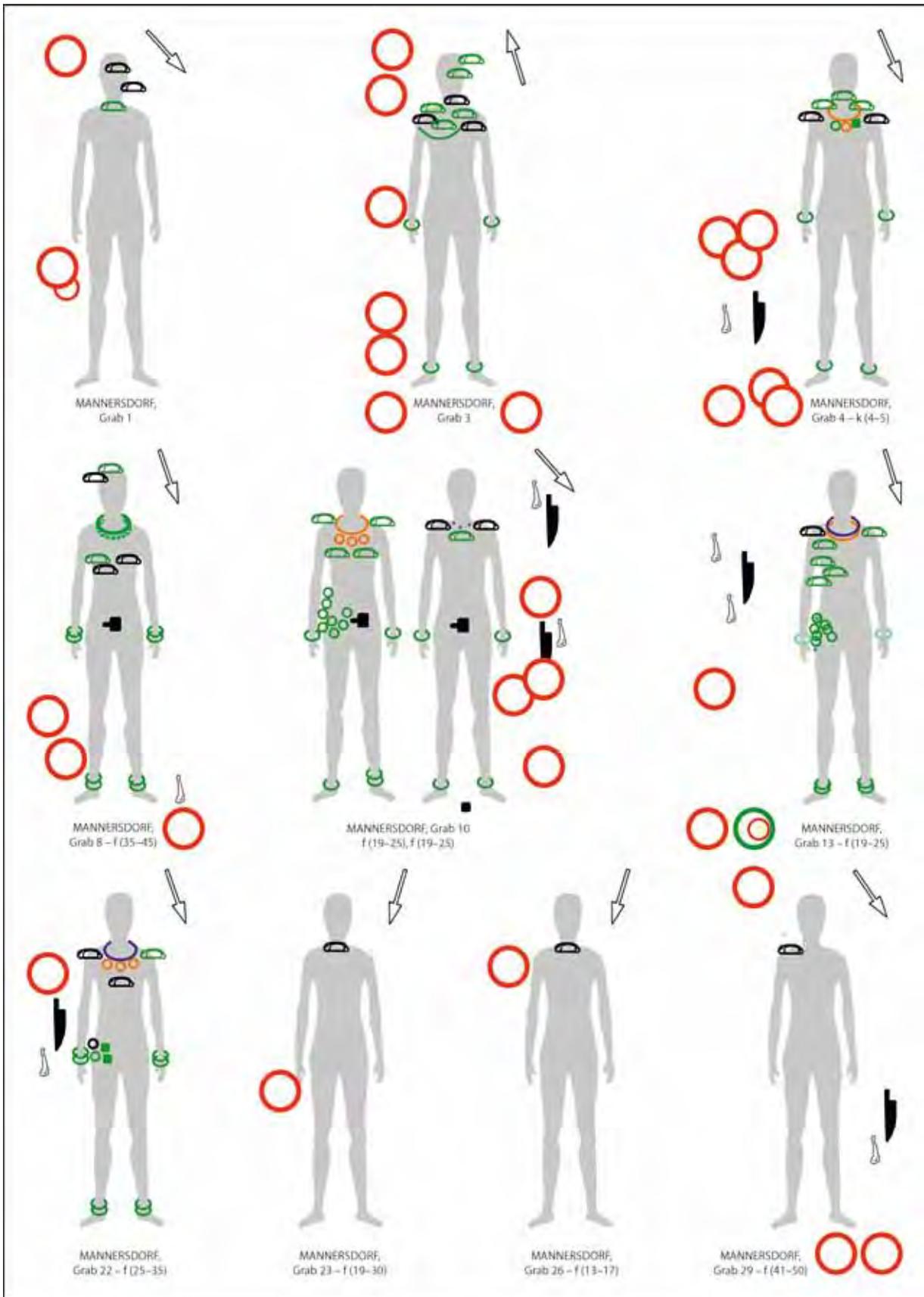


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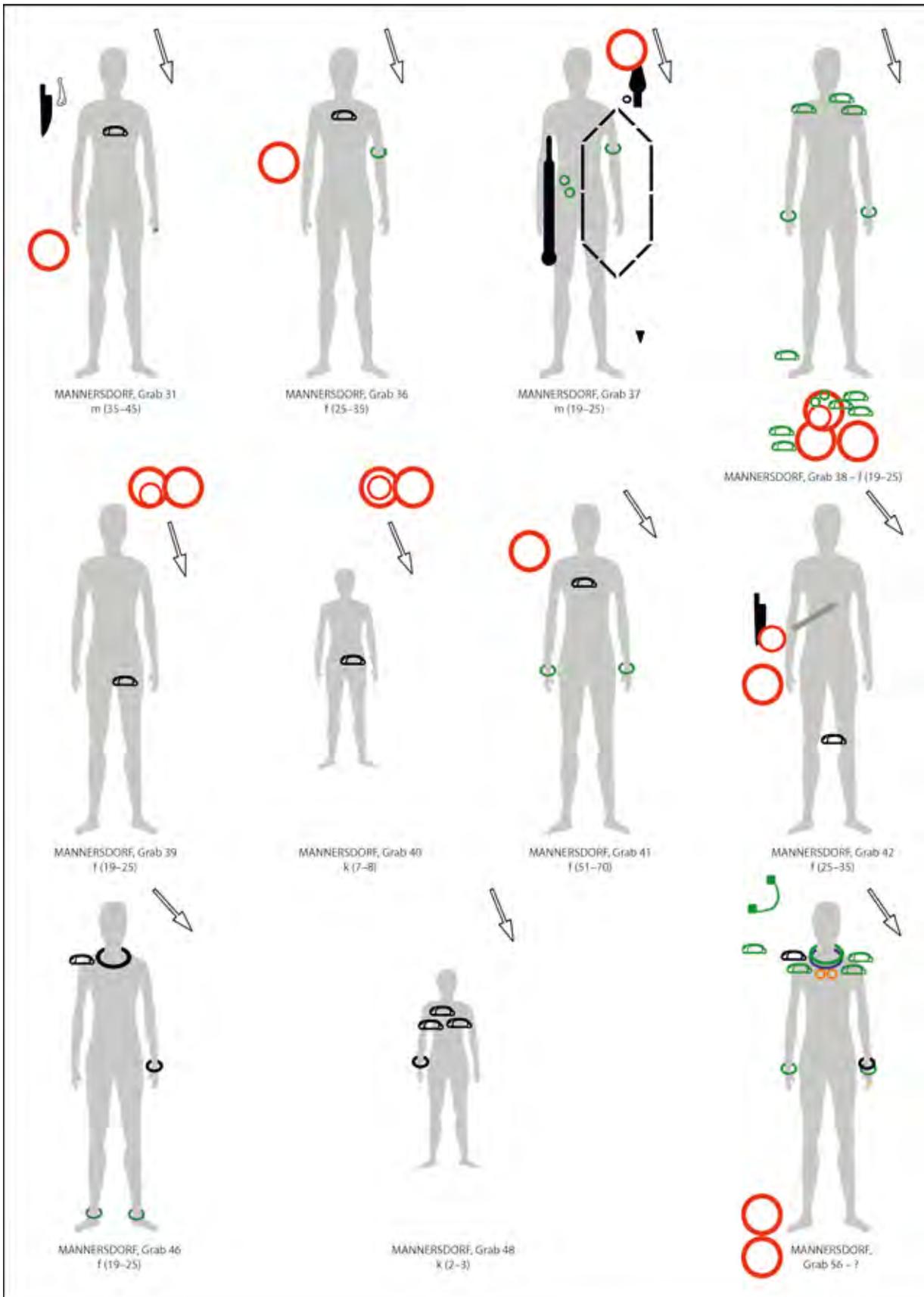


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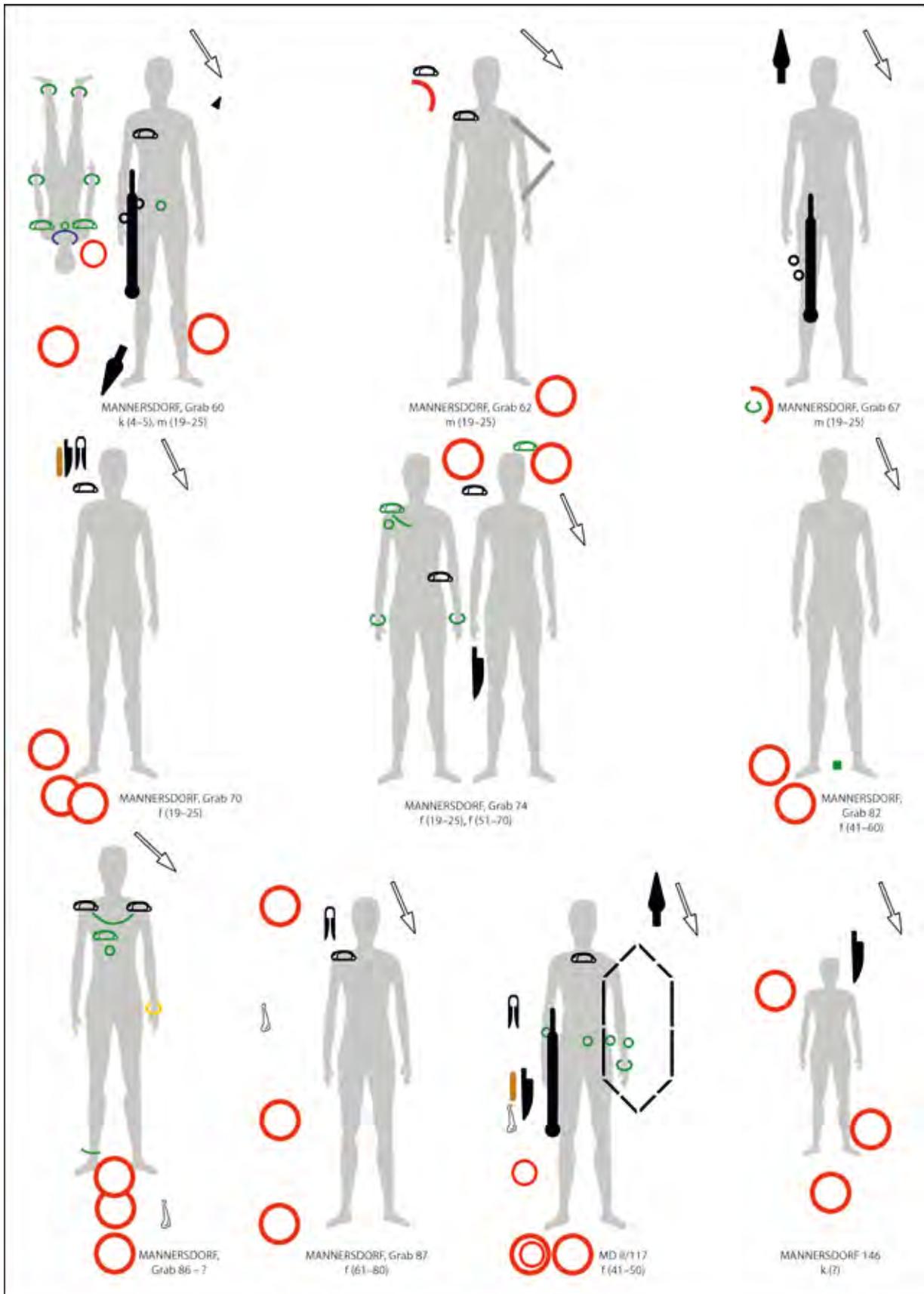


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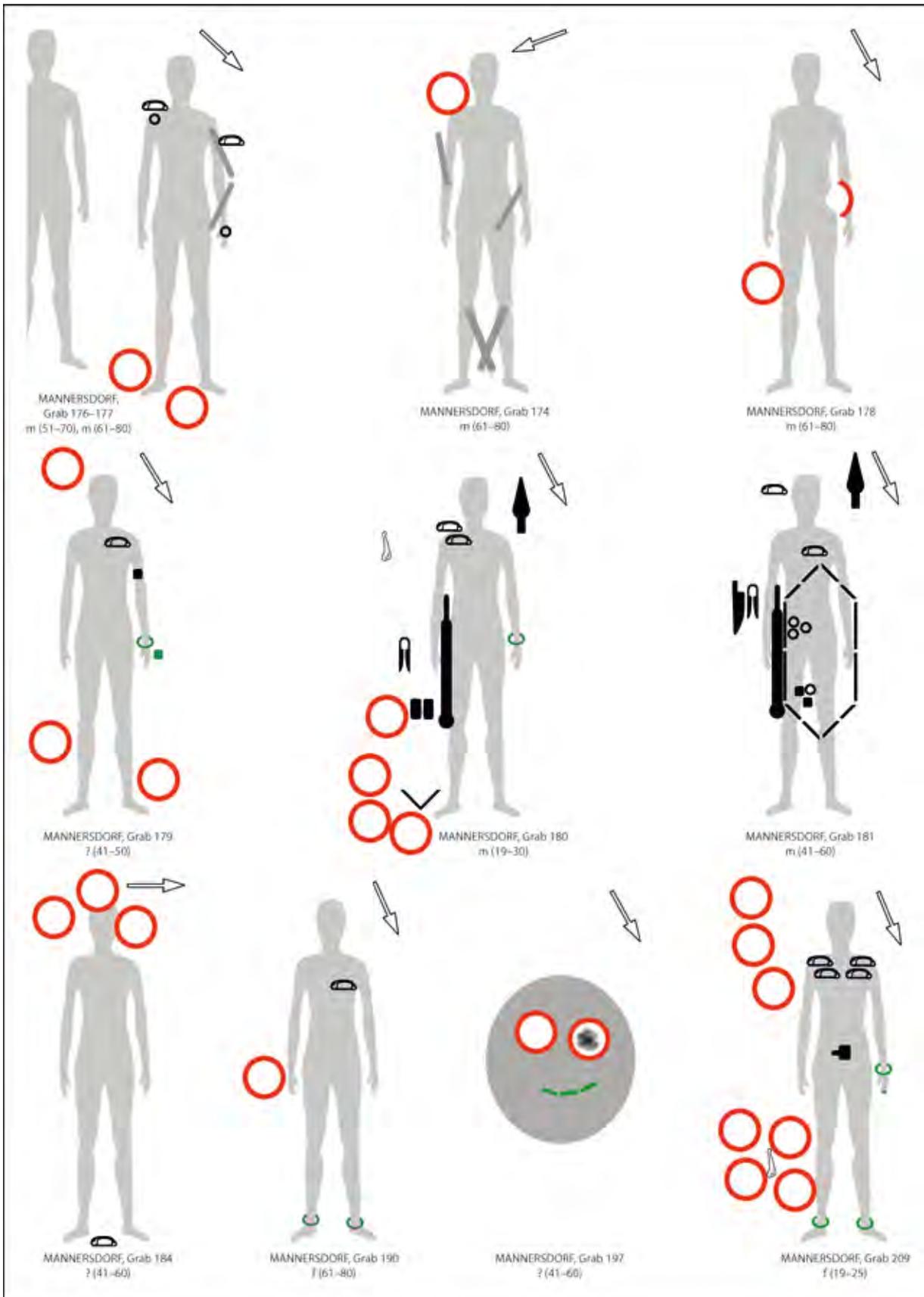


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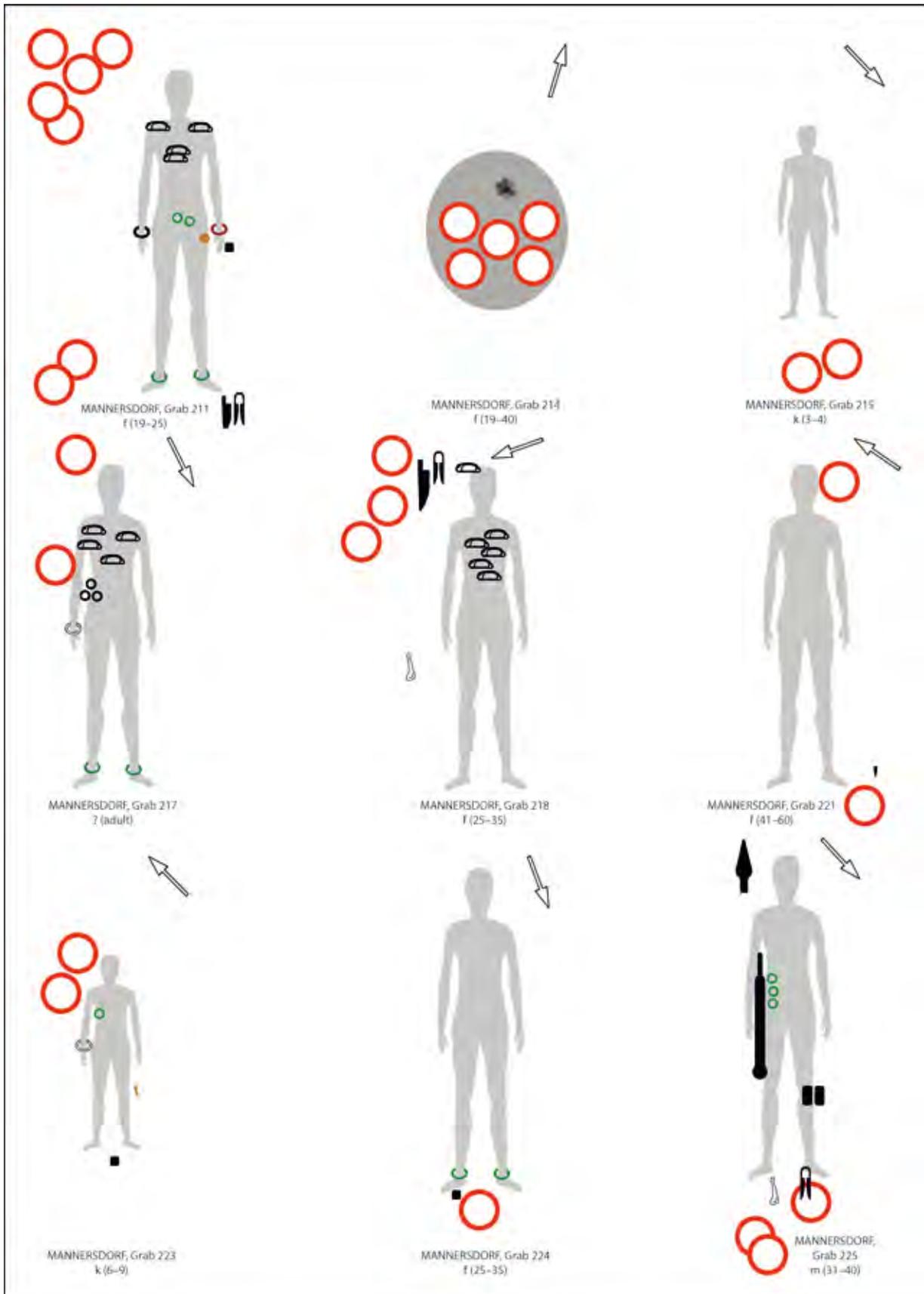


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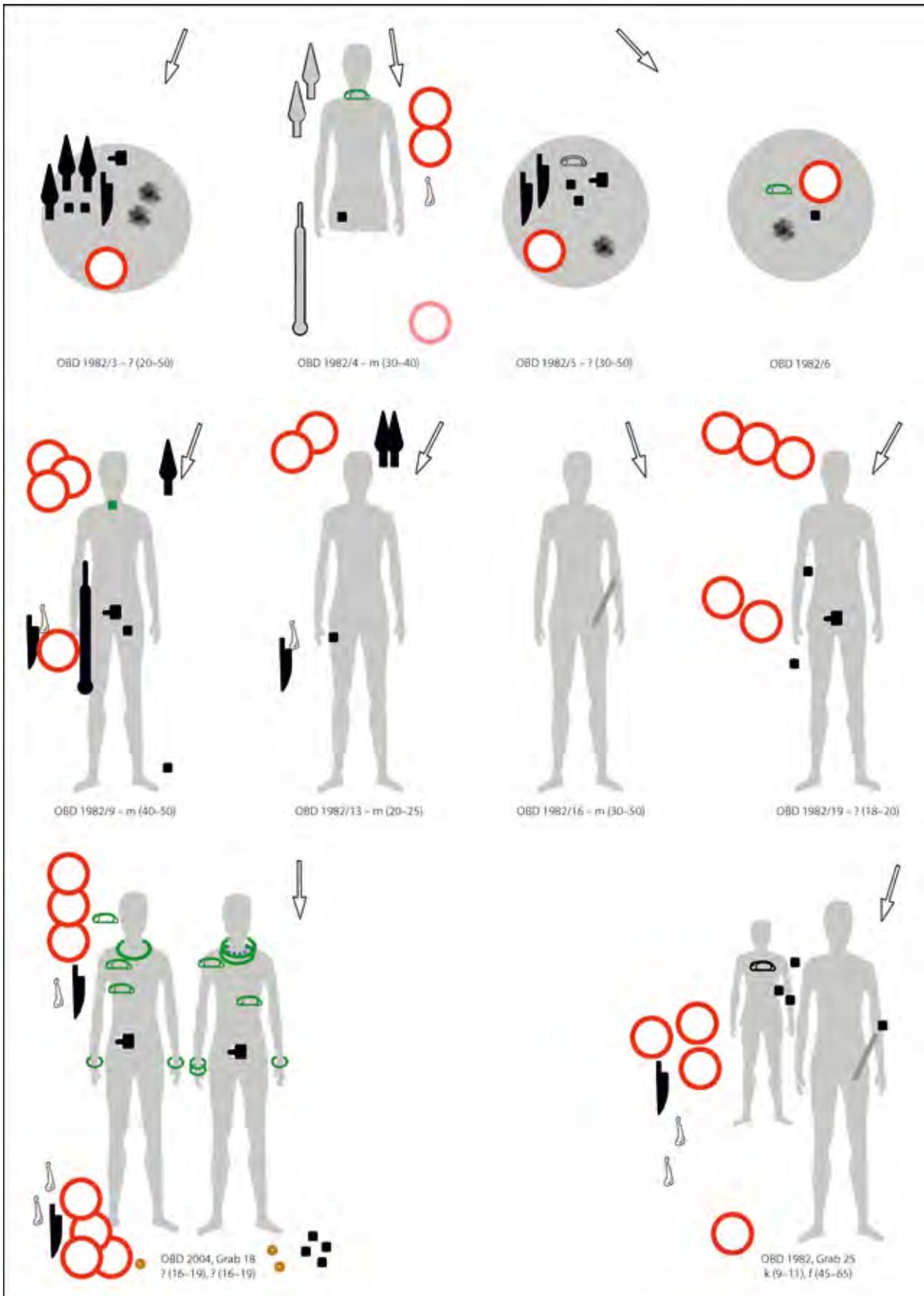


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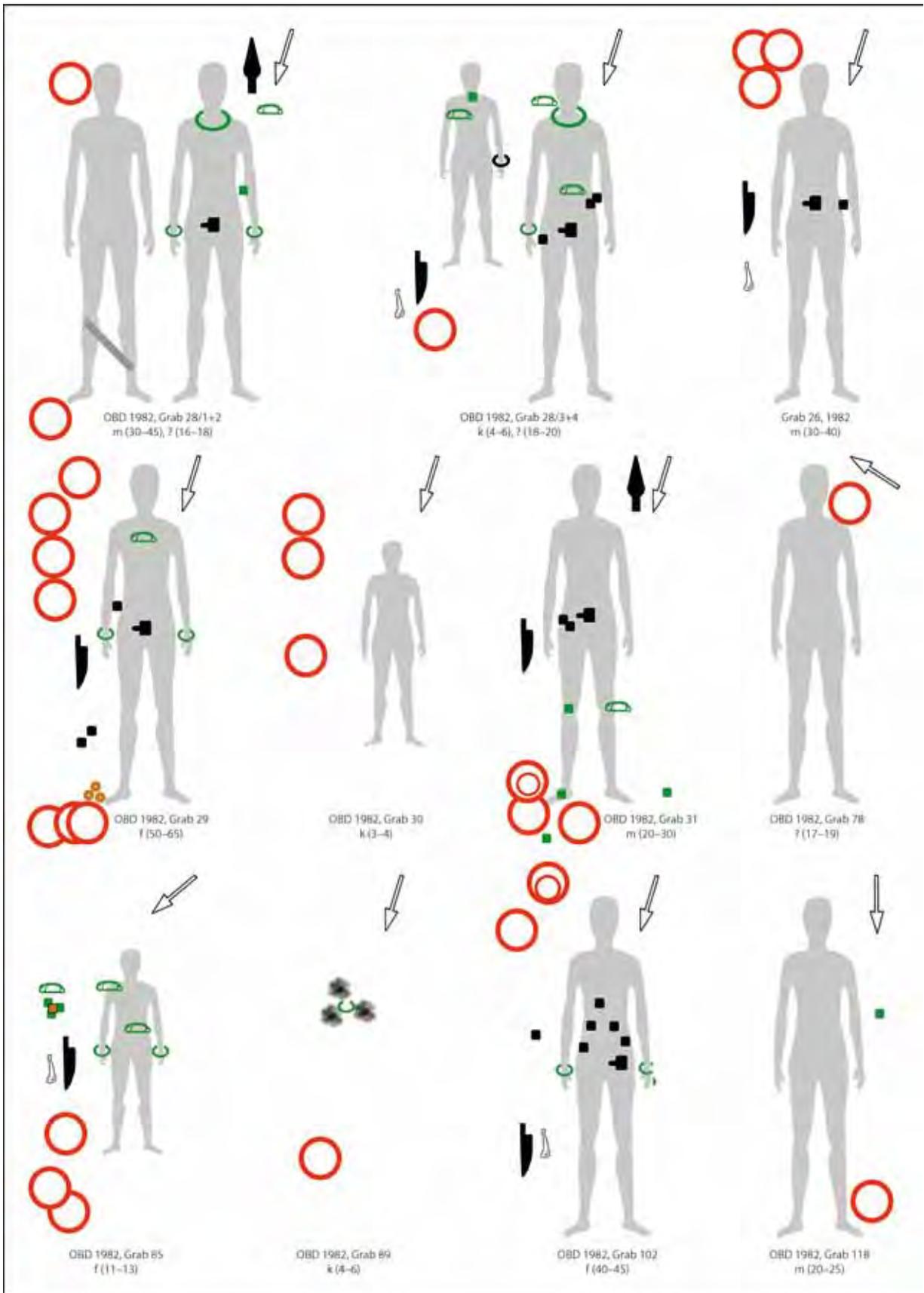


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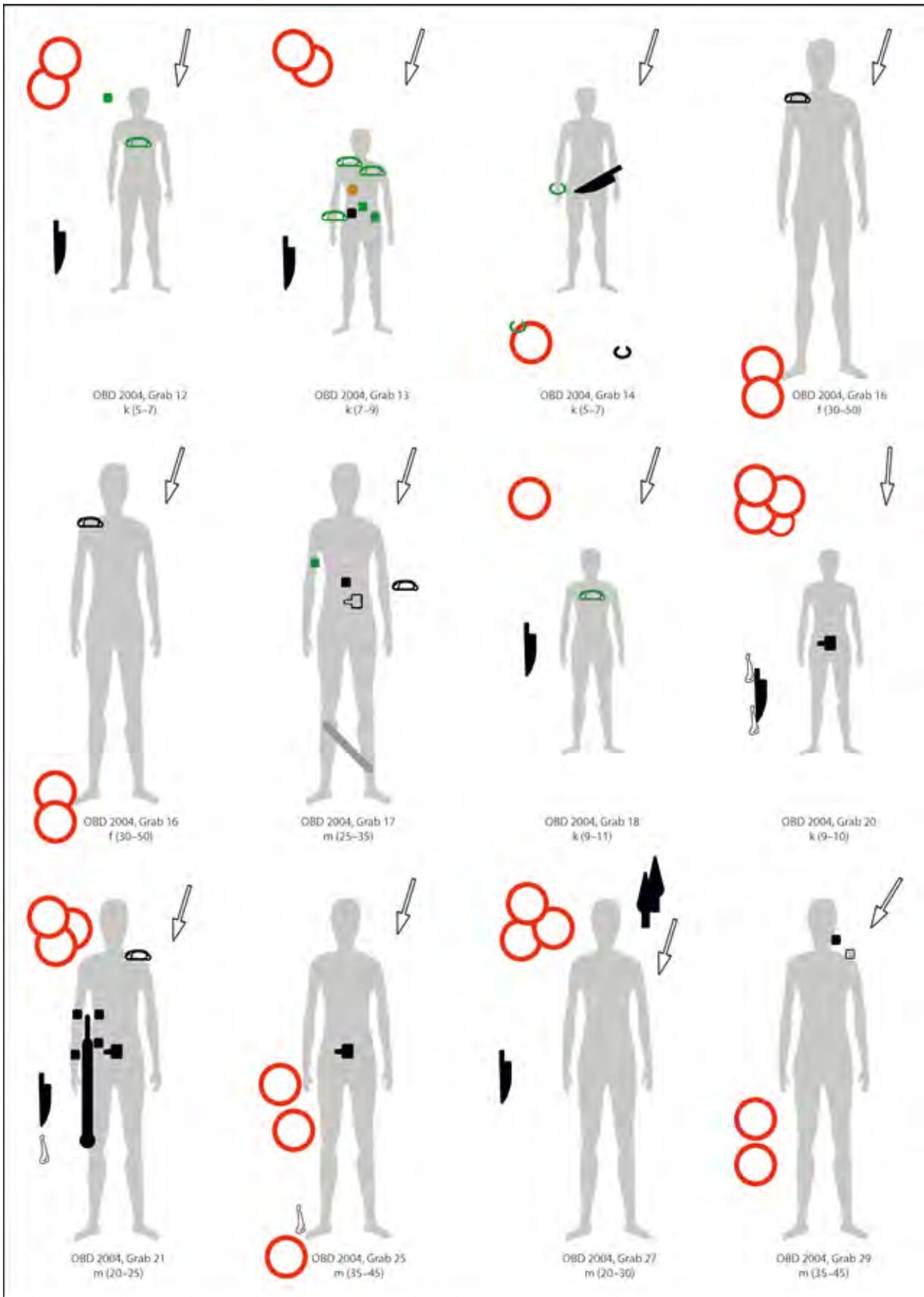


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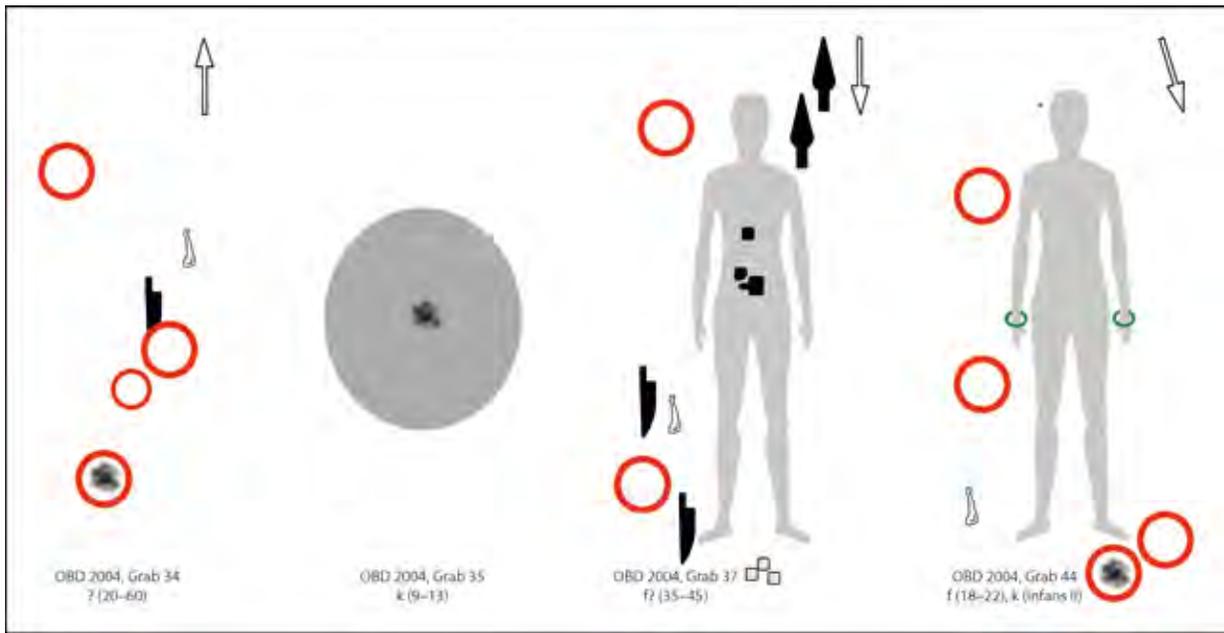


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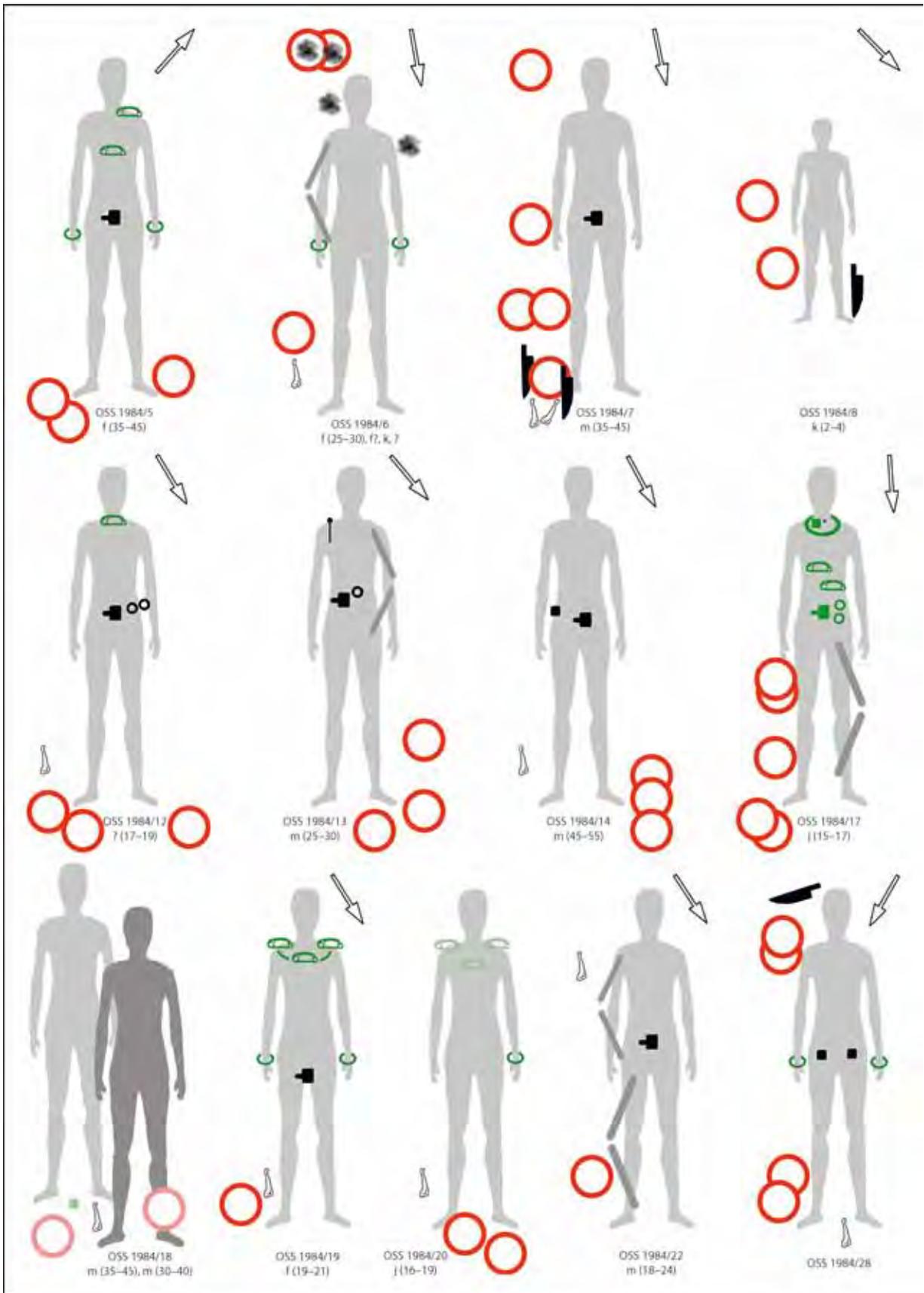


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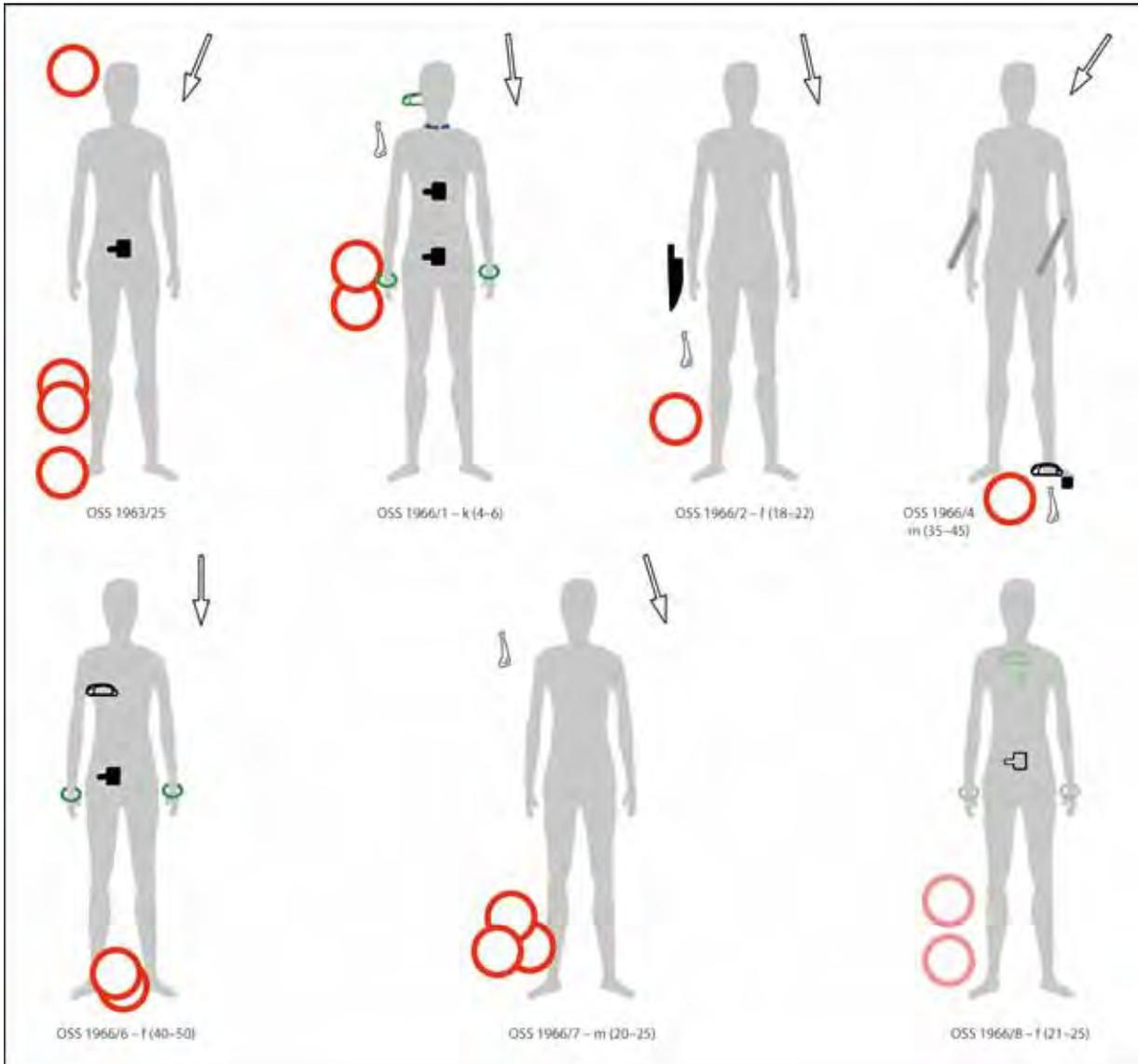


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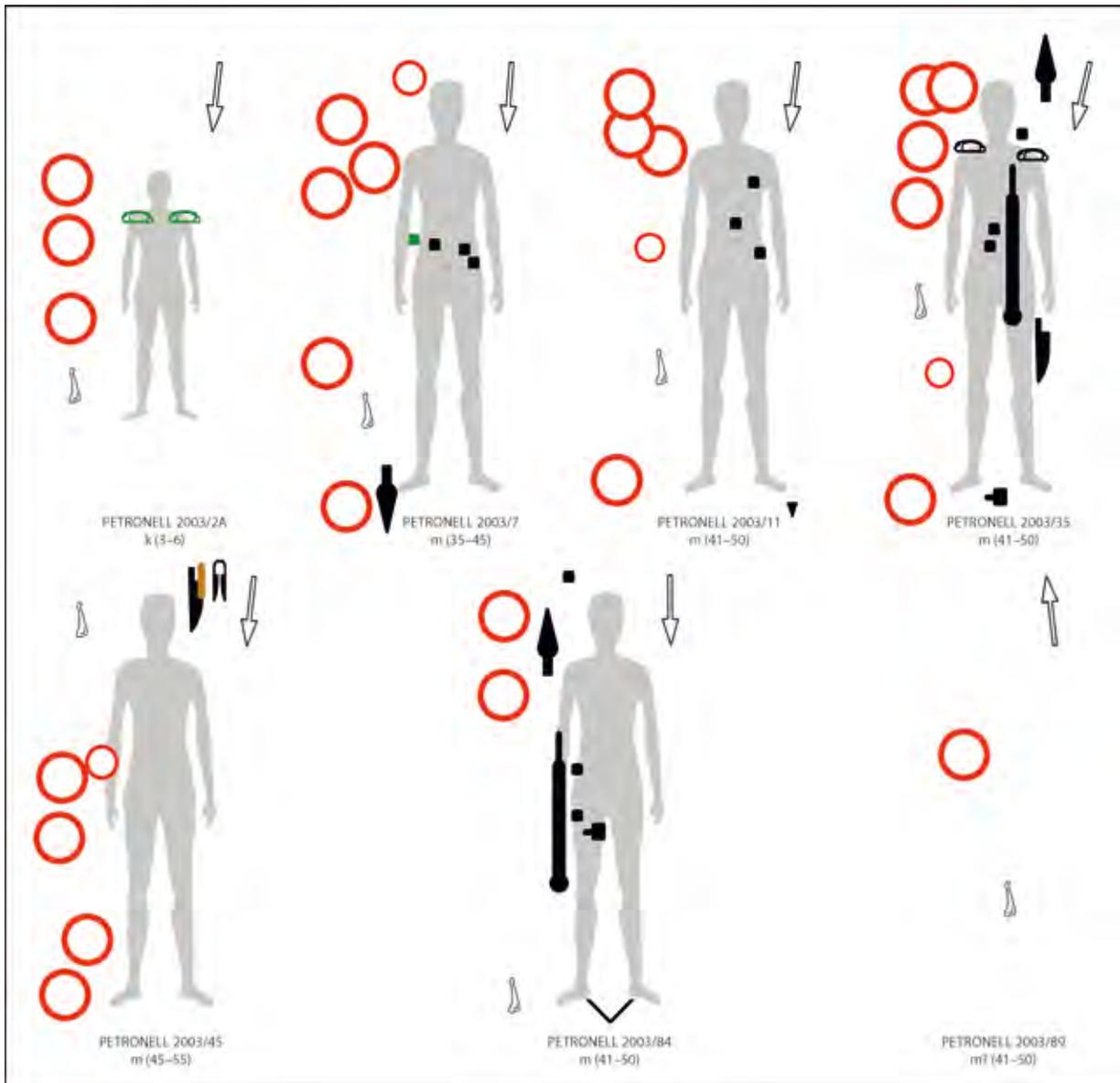


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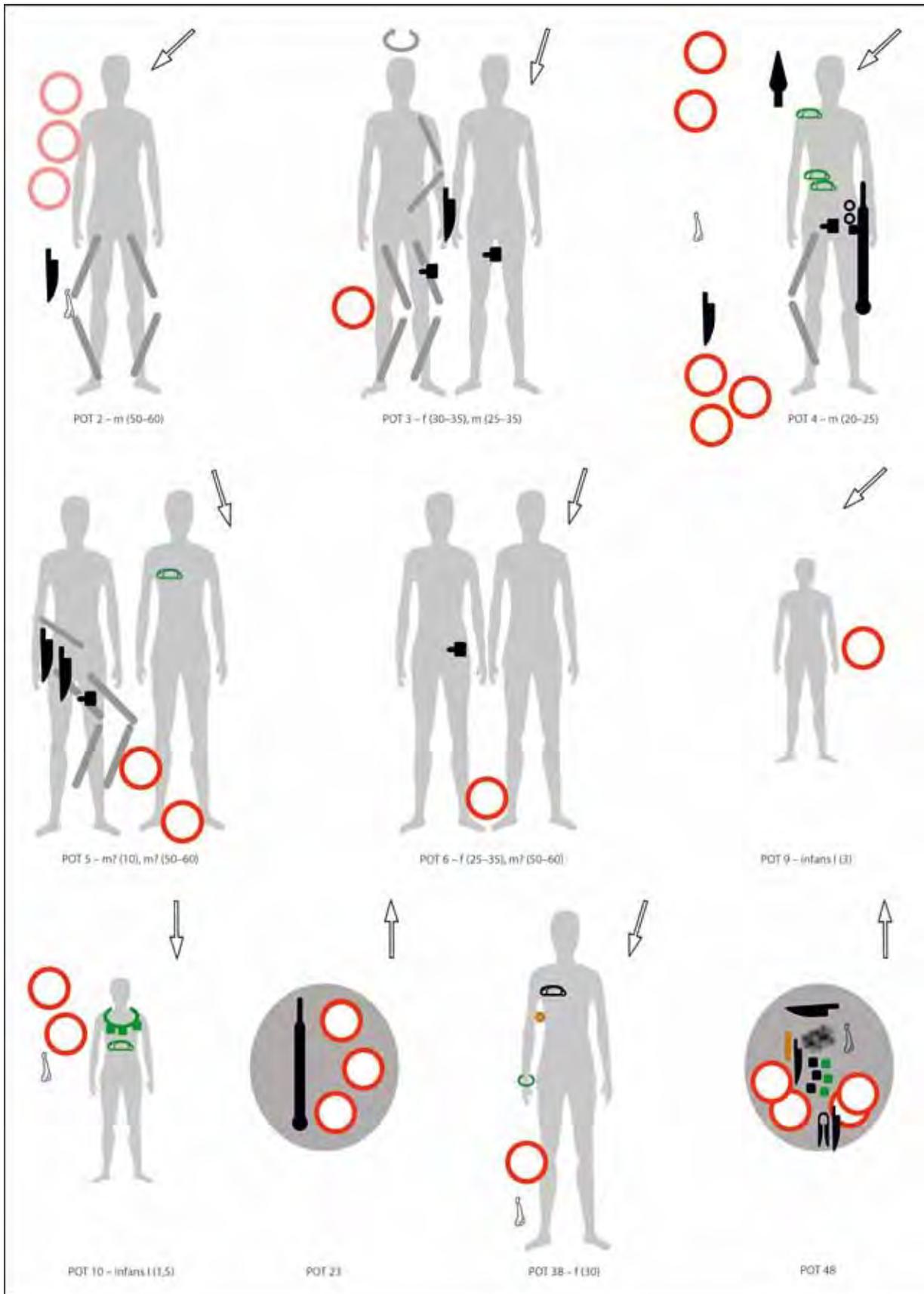


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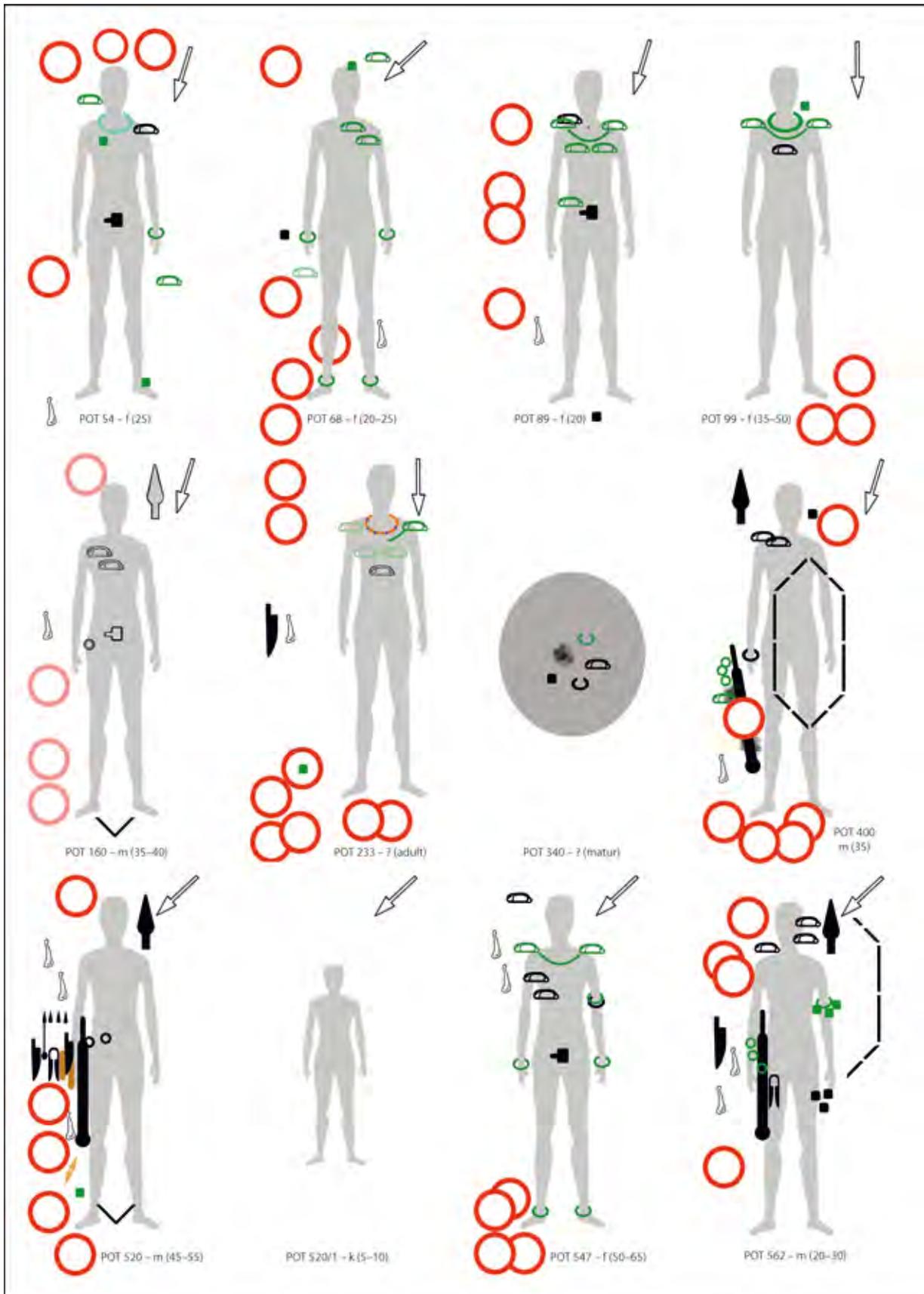


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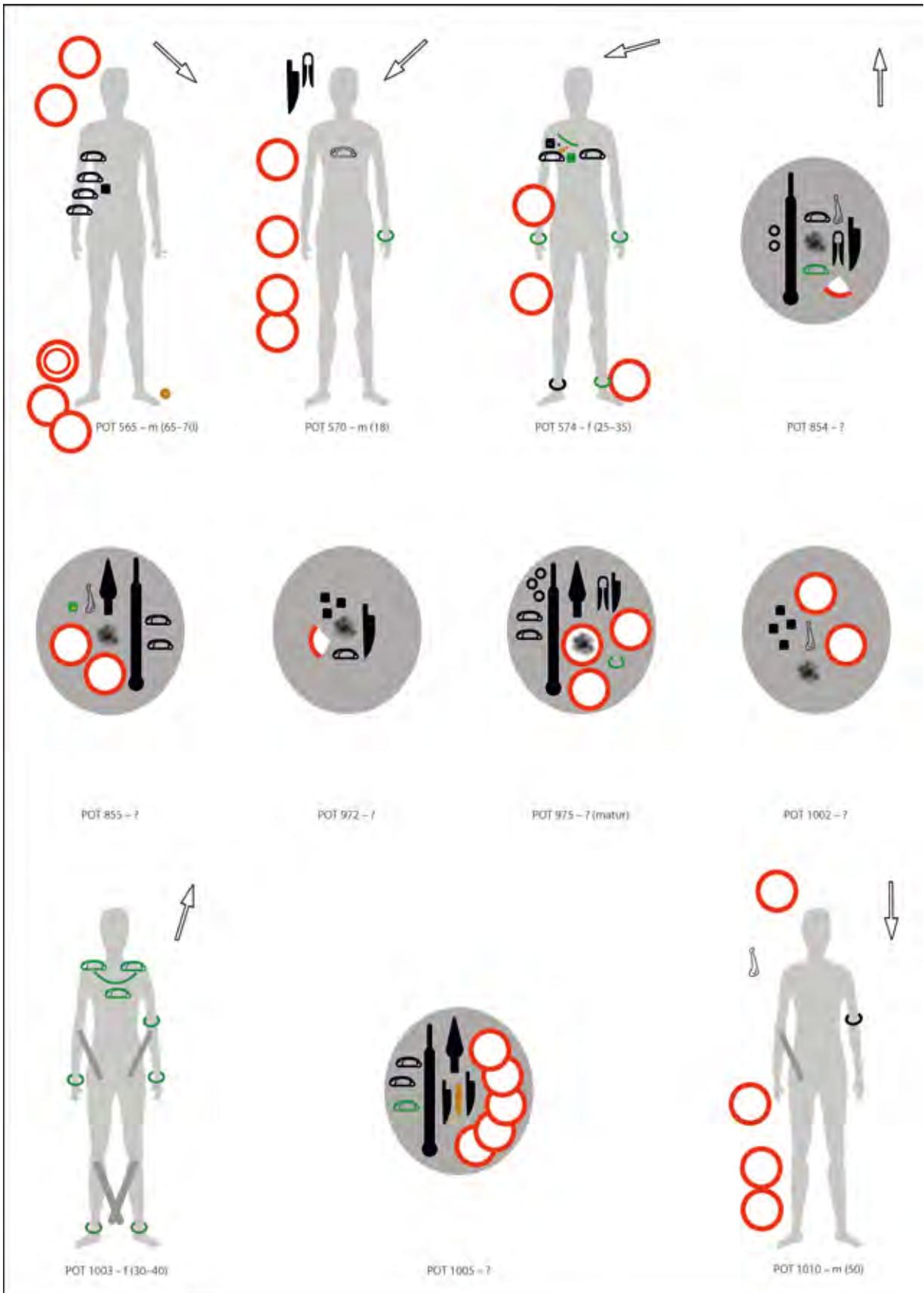


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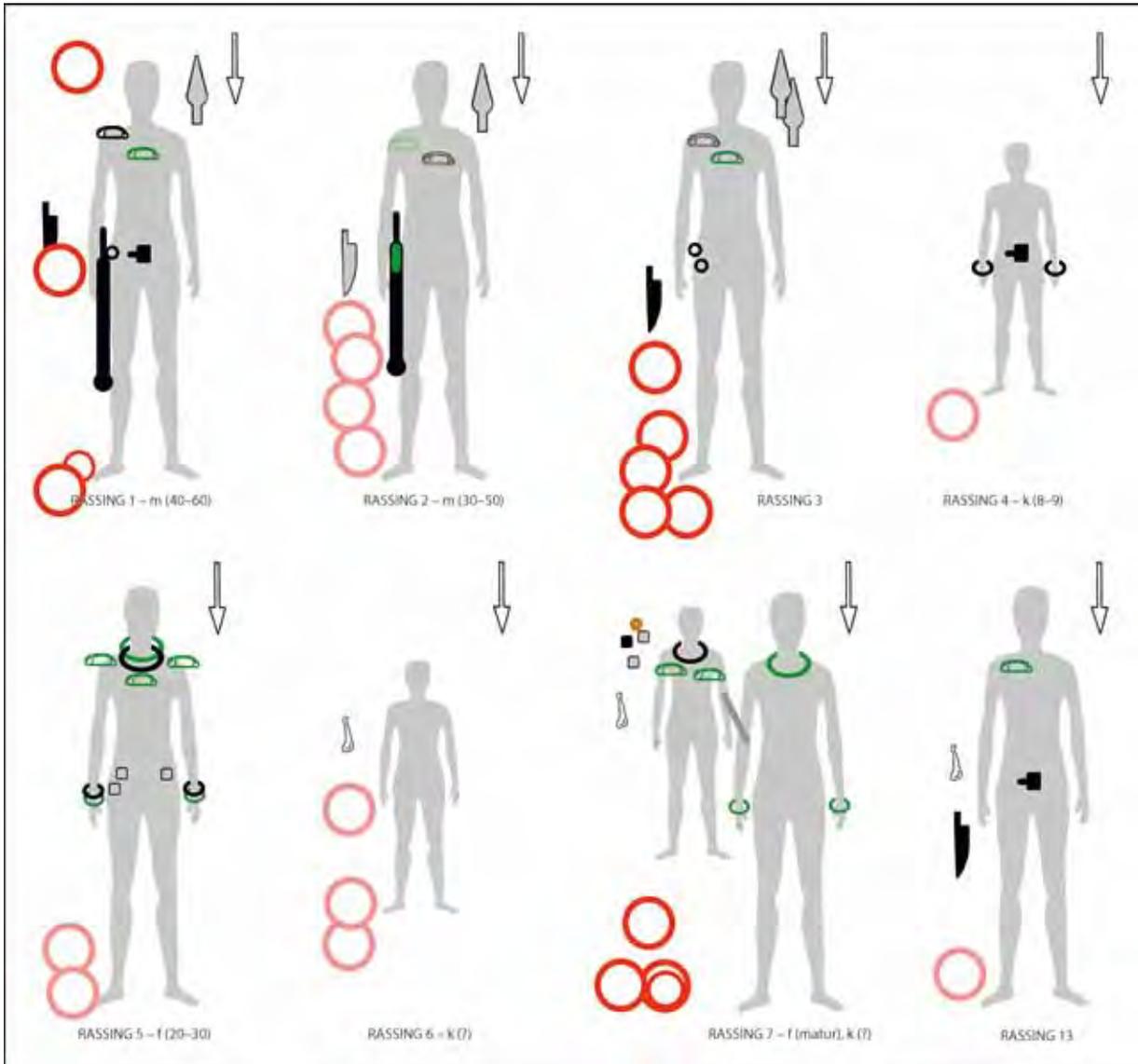


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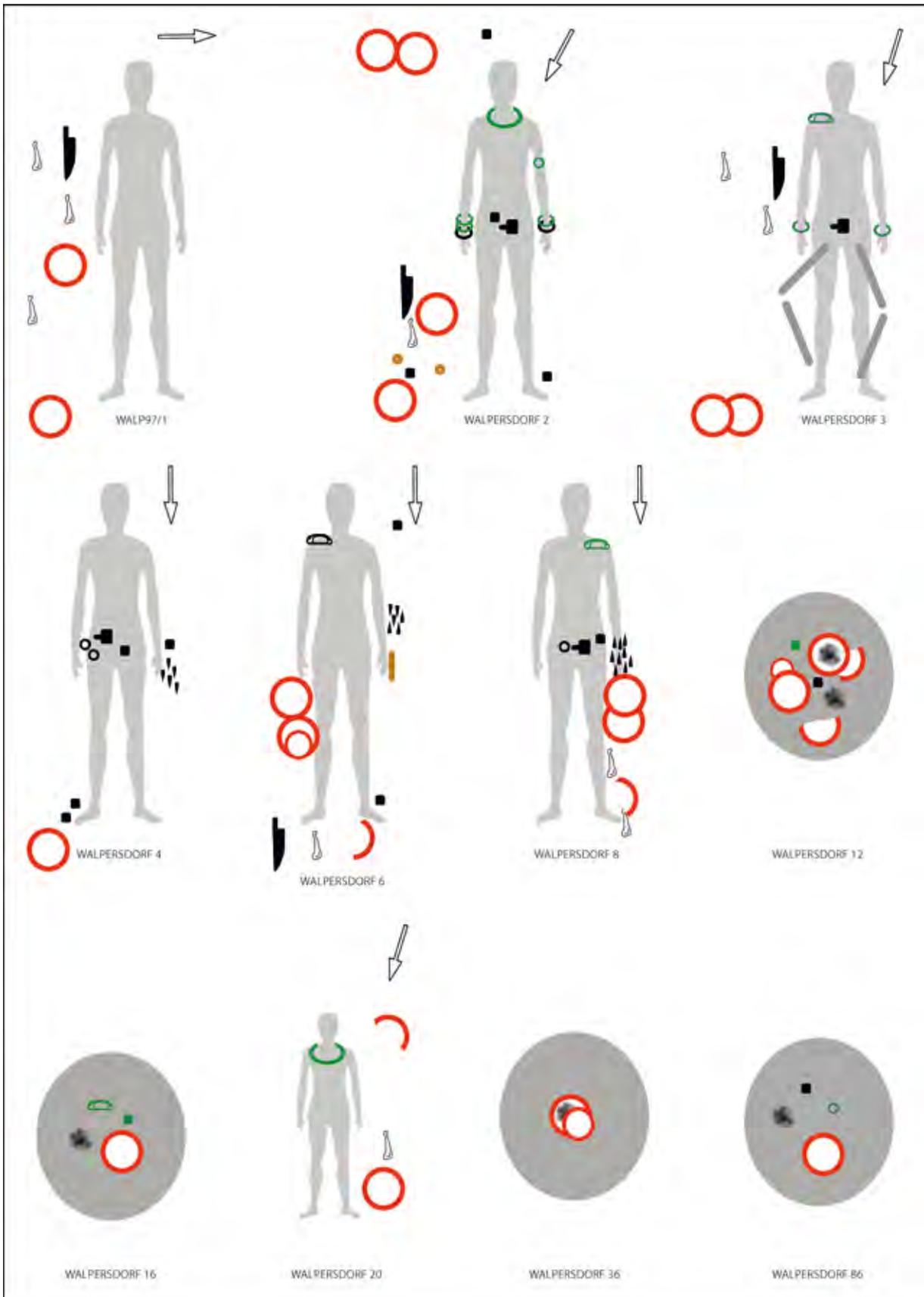


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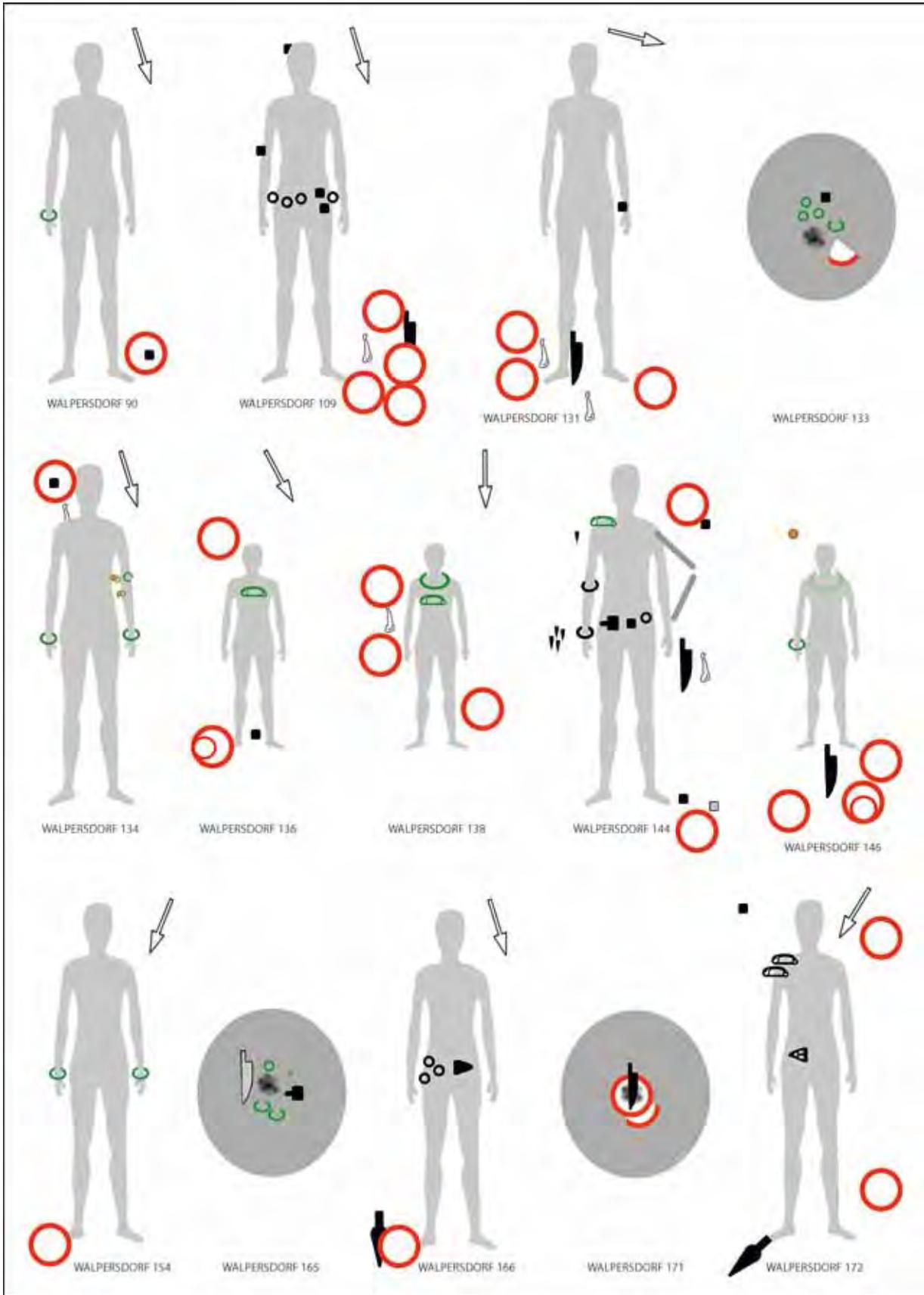


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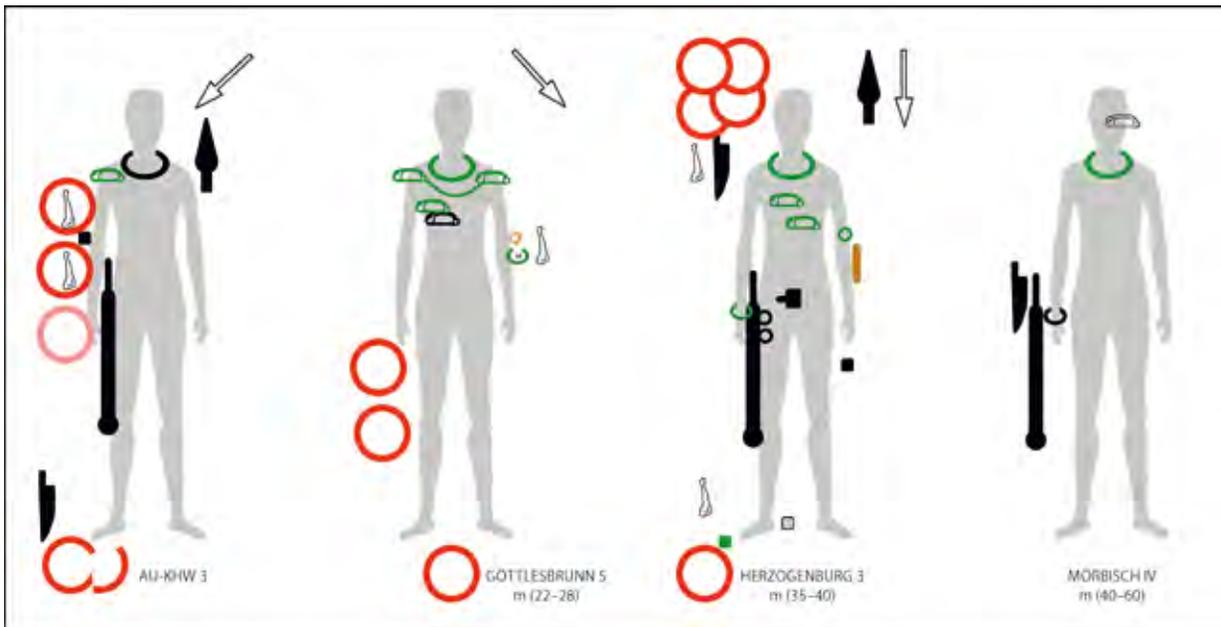


Fig. 14. Austria. Men with necklaces (Au am Leithaberge, Herzogenburg, Mörbisch, Göttlesbrunn).

Special cases

In between the La Tène cemeteries of eastern Austria, according to the present data, the following special cases can be mentioned:

1. Sword and necklace

In some cases, burials can be found in which swords and necklaces are combined. Unusual for our research area, this practice can be seen in Roman or Greek statues of 'barbarians'.

Normally, necklaces are used only for women in burials, as can be seen for example at grave 18 of Oberndorf (Neugebauer 1992, Fig. 10).

In eastern Austria, we can mention 3 cases: in grave 3 of Au-Leithaberge, site Kleine Hutweide/AU-KHW (see Nebehay 1973, 6, 7, Pl. II–III), Herzogenburg/HZ, grave 3 (Neugebauer 1981, 15, 16, Pl. 20–23) and Mörbisch, grave IV (Pittioni 1941, 101, 102; Pl. XVIII). Herzogenburg and Mörbisch are cast of bronze, Au seems to be made of iron wire (artefact lost). At HZ 3, a sword and bronze necklace is combined with an bracelet at the right hand wrist, which seems to be comparable with other cases, e.g., in Slovakia. Necklaces with a hook-eyelet and a plug closure are usually part of the female costume and date into La Tène A.

As a special case Göttlesbrunn, grave 5 can be mentioned, where a male individual (22–28 years) is equipped with a bronze necklace (next to 2 other fibulae), a symmetrical fibulae costume (connected with a fragile chain), a bronze bracelet, three ceramic vessels, a stone stela, and animal bones (Karwowski/Czubak 2019).

2. Sword at the left side

Normally in the La Tène period, swords are worn – in contrast to early medieval practice – along the right side. The reason for this is vociferously discussed (Waldhauser, Rapin), but still unknown. It seems to be another kind of *Schwertgehänge*, but also at that point we have to distinguish between the early La Tène A types with *Koppelringen with Schanieren* (e.g., in Herzogenburg – Eibner 1981, Pl. 5: 5) and the La Tène B and C flexible sword chains (see one of the various types e.g., at Bodroghalom – Szabó/Petres 1992, Pl. 5). Only a few burials have been found thus far where the sword is placed NOT at the right side (also in functional position): Nebringen (Krämer 1964), Libkovice, Münsingen (Hodson 1968), and Petronell (Ramszl 2016). This was also summarized by J. Waldhauser (Waldhauser 1978). If we have a closer look at all these examples, the sword is lying diagonally across the body or in a non-functional position. Only in grave 122 (m; 25–30) at Nechvalín in Moravia (Bučíková 1985, 142) does it

seem to have been placed at the hip, formerly fixed at the belt. In Austria, we have only two cases of this phenomenon. At first Mannersdorf I (*Seracin/Zehenthofer 1916, 76, 77*). The sentences “... lag links seitwärts in der Gegend des Beckens...” connotes that it was placed at the left side (unfortunately, it seems that they didn't make any documentation of the burials). The second example is the well-documented burial in grave 4 of Pottenbrunn (*Ramsl 2002a, 26, 27; Pl. 27; 28*), where the sword is placed at the functional position at the left hip at the height of the belt. At first sight this seems to be a curious position for a sword at this time period, and it is indeed very interesting when we note the combination with two bronze fibulae connected by a thin chain, for this double fibulae combination is a well-known part of the female costumes in the early La Tène period.

3. East-West orientation (table 1)

As mentioned several times, the usual orientation of La Tène burials in eastern Austria is from SE–NW to SW–NE (*Ramsl 2012j, 185*). Only a few of the grave shafts were not built according to this rule. So Mannersdorf I, grave 11 (*Seracin/Zehenthofer 1916, 78*), in Mannersdorf II (*Ramsl 2011, Pl. 177*), in Franzhausen, grave 79 (m; 51–70), 768, and 1094 (*Neugebauer 1993, Fig. 10; 11*; see also *Novotny* in this book), Kuffern 1 (*Nebehay 1993, 15*) and 1a (*Nebehay 1993, 18*), as well as Gemeinlebarn 2010 (*Preinfalk/Preinfalk 2014, 45, Fig. 2*) have an east-west orientation. As far as can be said, all these burials of these groups are connected with male individuals and/or weapon grave goods. The time period, on the other side, lasts from Ha D to LT C.

On the other hand, we have the examples of *two women* in Pottenbrunn, grave 574 (f; 25–30) and Mannersdorf II, grave 218 (f; 25–35), which have this unusual orientation.

From the graves FH 524, 812, and 854 we have no anthropological analysis, and there are no special markers in these graves.

Table 1. List of E–W oriented graves (Austria).

Cemetery	No.	Sex, age	dating	Important grave goods
MD I	11	?	LT C	sword, shield
MD II	174	m, 61–80	LT B	1 pot
FH	768	m	LT B	sword, lance
FH	1094	m, 35–45	Ha D?	arrows
GM	“2010”	?	LT A	sword, lance
KU	1	?	LT A	sword, lances, bronze situla
KU	1a	–	LT A	lance, arrow

“2010” – grave number not given, 2010 is the year of the discovery.

4. West–East orientation

As mentioned above, deviations from the usable orientation of the burials are very rare. Also the west-east orientation only has three (?) cases in eastern Austria. These are Franzhausen, grave 30 (unpublished), which is the burial of a 51–70 year-old male individual with very special grave goods. Because it suffered an ancient robbery, only part of them survived. It was excavated on January 24, 1985, and on the plan is the remark *Winternotbergung* (‘rescue excavation in winter’). Next to 2 small bird-shaped fibulae a big iron knife and the remains of several ceramics (also a flask – *Linsenflasche*), the remains of exceptionable fittings of a shield survived (which is shown at the museum in Nußdorf an der Traisen). Next is Franzhausen (FH) 496, which is the burial of a woman age 19–22, which con-

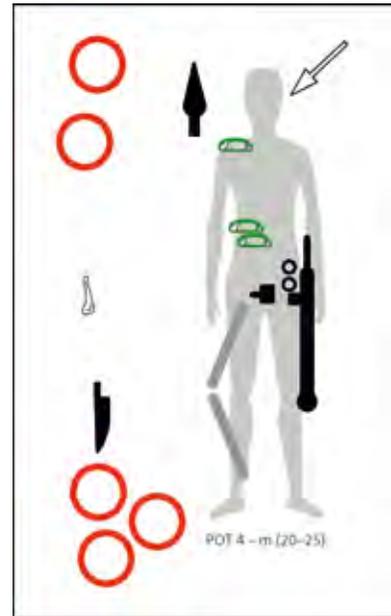


Fig. 15. Pottenbrunn, grave no. 4. Burial with sword along the left side.

Table 2. List of N–S oriented graves (Austria).

Cemetery	No.	Sex, age
FH	206	m, 41–50
FH	373	m, 25–35
POT	1003	f, 30–40
AU MBA	3	–
AU KHW	8	–
MD II	230	m, 14–17
GEM MG	506	–

Table 3. List of N–S oriented graves (Getzersdorf).

Cemetery	No.	Sex, age	Important grave goods
GETZ	5	–	sword, lance
	6	–	necklace, full costume
	7	–	2 bracelets, 1 upper arm ring
	8	–	1 fibula
	9	–	sword, lance
	10	–	1 fibula, 1 pot
	11	–	2 fibulae
	12	–	1 fibula
	13	child	1 fibula, 2 bracelets

tains only one ceramic fragment. The third example is grave Mannersdorf II (MD II), no. 184 (*Ramsl 2011*, Pl. 191; 192), the burial of a 41 to 60 year-old individual with one fibula and some ceramics with an remarkable stamp (*Zeiler et al. 2010*).

5. North–South orientation (table 2)

In addition, the orientation with the head in the north is unusual for the eastern Austrian area. The several examples we found are mentioned here.

At the cemetery of Getzersdorf, it is remarkable that nearly all (documented) burials are orientated N–S, no matter if they have female or male markers (table 3). This seems to be a special, small group inside the Traisen valley group, compared to the cemetery of Brno-Chrlice in Moravia (*Čižmářová 2004*, 145, 146).

6. Individuals with weapons with bracelets left and right

The remarkable combination of a sword (and a spear point) with the costume parts of two bracelets (at the right and left hand wrist) is described at grave from 1905 in Mannersdorf I (MD I; *Bortlik 1906; Seracin/Zehenthofer 1916*, 73, 74), where the history of the exploration is not really clear. The second case is that of Oberndorf 1982, burial 2, where a possible female individual (16–18 years) with two bracelets and a necklace has a spear point left beside the skull.

7. Women with weapons (and tools)

In eastern Austria, at the present state of research, we have two examples of women with weapons. On the one hand, is grave 117 from Mannersdorf II (*Ramsl 2011*, Pl. 135–141) which consists of the burial of a female individual (41–50 y.), equipped with a sword, a lance tip, shield rims as well as parts of a belt, a bronze finger ring, an iron fibula, and bracelet at the left hand wrist. Next to it, a pair of scissors, a big iron knife with animal bones, and four ceramic vessels have been found as grave goods.

The second example is grave 37 from Oberndorf 2004, where a 35–45 old woman is buried. Among the grave goods we can mention two spear points, two iron knives of different shapes, some belt parts, and several ceramics, as well as strange tools made of antler (*Ramsl, in prep.*). The antler tools can be compared with those in grave 322 at Dürrnberg-Nordgruppe (*Zeller 2003*).

8. Men with spinning whorls

In our area, we have one example where a burial of a male's burial contains a spinning whorl. This is Pottenbrunn 565 (*Ramsl 2002a*, 48, 49; Pl. 67; 68), where a male individual (65–70 years) is buried, equipped with a bronze and silver fingering, 4 fibulae, a spinning whorl, and seven ceramic vessels.

MORAVIA

Research history and the present state of research

Moravia is one of the regions in Central Europe where ‘Celtic archaeology’ has a long tradition and the state-of-research is at a very high level. Representing a transition-area between the Silesian and south Polish centres (Moravská brána) and the landscapes of Lower Austria, in all periods of history it had been extremely densely populated, mainly in the southern and eastern parts. Sites with registered La Tène graves currently number 250 in the area of Moravia, and they have provided 780 find-complexes. Starting with the cemetery of Blučina (*Ludikovský 1970*) and Lovčičky, both of which were excavated by K. Ludikovský, it was J. Meduna, who not only explored graveyards like Pustiměřské Prusy, but also created the catalog of La Tène period sites in Moravia (*Meduna 1980a*), which is a counterpart of his major work, the theoretical monograph *Die latènezeitlichen Siedlungen in Mähren* (*Meduna 1980b*). Moreover, numerous reports have been published on newly-discovered individual graves and documentation of new cemeteries like Brno-Horní Heršpice (*Meduna 1970*), Místřín (*Dohnal/Ondruš 1964*), Bedřichovice (*Čižmář 1985*), Nechvalín (*Bučíková 1985*), Brno-Chrlice (*Čižmářová 1990*) – and in more recent times Hoštice, Hustopeče, and Žatčany (*Čižmář/Geislerová 2006*, 189, 193–195). Another updated overview appeared in 2004 *Encyklopedie Keltů na Moravě a ve Slezsku* (*Čižmářová 2004*). Finally, the publications of the directories of the cemeteries of Brno-Maloměřice (*Čižmářová 2005*), Holubice and Křenovice (*Čižmářová 2009*), from Brno-město and the surroundings of Brno (*Čižmářová 2011*), as well as the districts of Blansko and Vyškov (*Čižmářová 2013*) and Hodonín, Kroměříč, Olomouc, Opava, Prostějov, Pěerov, Uherské Hradiště, and Zlín (*Čižmářová 2017*) complete the picture and give us an enormous corpus of material. Nor should we neglect to mention the research of Petra Golářová (e.g., *Golářová 2018*).

Cemeteries (Fig. 16; 17)³

Blučina 3 (BLU), distr. Brno-venkov

In the cadastral district of Blučina, three settlements are known. From the La Tène A-period settlement at the “Nivka” site (1954), isolated pits were excavated and from the late La Tène period a settlement was found in 1958 at the “Konopné zahrádky” site. However, the settlement of the subperiod La Tène B at the “Spodní Kolberky” site has been best investigated, where I. Peškar in 1965 and 1975 excavated seven rectangular pit houses. In 1961–64 K. Ludikovský conducted excavations at Konopné zahrádky of a cemetery that consists of 20 graves and is dated to the period LT B – more precisely, to its late phase. There were eleven male graves determined with certainty, including four warriors with weapons and typical jewelry, while a massive, opulently decorated bronze double ring is of particular note. Among the finds from the women’s graves, especially from grave no. 20, objects with origin from the Carpathian basin were represented.

From the other cemetery in the village center only two graves were rescued in 1970. Of them (La Tène B1) one contained i.a. bronze Münsinger fibulae, an amphora-shaped glass bead, and a sword-shaped pendant whose origin lies in the southern Alps in the area around Lake Como. The apparently oldest find is described by B. Dudík – it is a grave in which the burial is surrounded by stones. Found on the skeleton were glass beads and ‘gilded’ bronze pieces, an oval anklet, a Certosa fibula (mask shaped), and a vessel (*Čižmářová 2004; Meduna 1980a*).

³ Schematic graphics of the La Tène burials in Moravia: for Moravia, the cemeteries of Blučina 3, Brno-Chrlice, Bohunice, Brno-Maloměřice, Holubice, Horní Heršpice, Hoštice, Křenovice, Lovčičky, Marefy, Nížkovice, Ponětovice, Pustiměřské Prusy, and Šlapanice have been chosen because of the quality of the datasets. Some graves have not been recorded because of severe robbing. The cemetery of Ponětovice, which is completely in cremation rite, is represented as inhumations, because they can be better imagined.

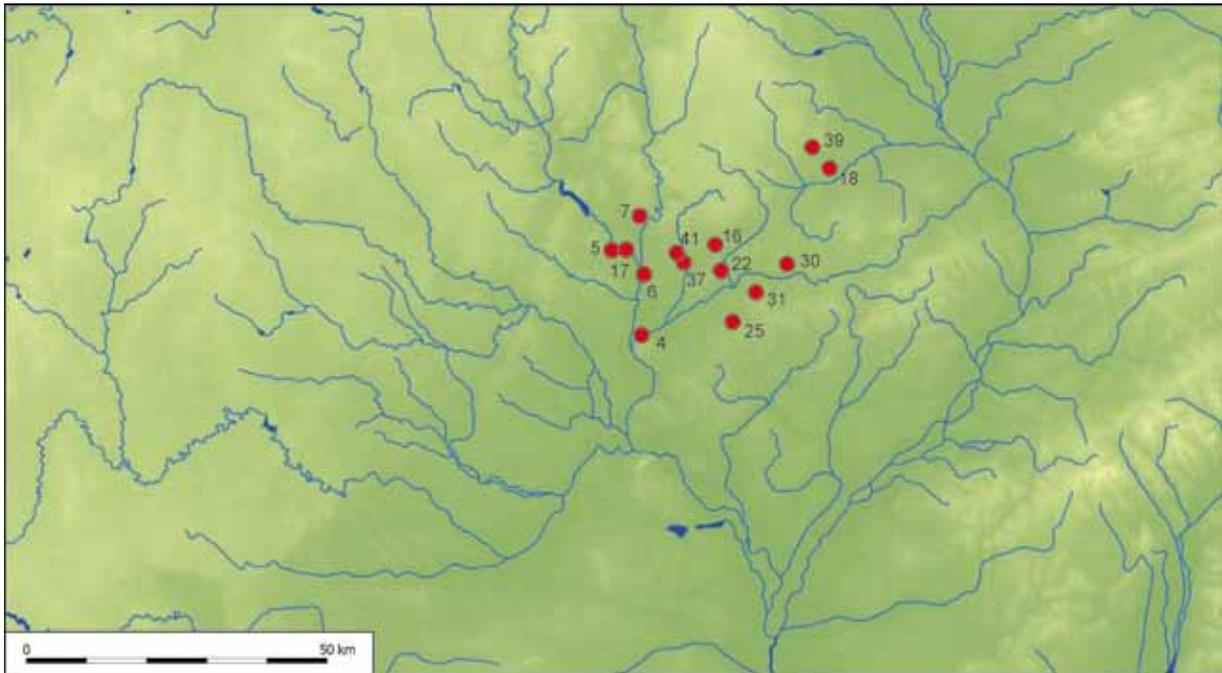


Fig. 16. Moravia. Map of selected sites. 4 – Blučina 3; 5 – Bohunice 2; 6 – Brno-Chrlice; 7 – Brno-Maloměřice; 16 – Holubice; 17 – Horní Heršpice; 18 – Hoštice; 22 – Křenovice; 25 – Lovčičky; 30 – Marefy; 31 – Nižkovice; 37 – Ponětovice; 39 – Pustiměřské Prusy; 41 – Šlapanice.

Brno-Chrlice (BC), distr. Brno-město

At the “Přední roviny” site, rescue excavations conducted in 1969–1971 during the construction of a silo disclosed (in addition to the objects of various prehistoric cultures) 14 Celtic graves and a Celtic pit house and pottery. The 14 graves comprised 13 inhumations and one cremation. The inhumations belong to the older La Tène period (LT B1), the cremation is younger, dating to the middle phase of the La Tène period (LT C1). Unusual in the inventory of the La Tène cemeteries of Moravia is a neck ring of twisted wire and stamp shaped ends. Only a few analogies from either nearby lands (Carpathian Basin, Austria) or more distant areas (Switzerland) are known. In Champagne they are known in larger numbers. An exact analogy is known only from the Oberpfalz in Germany (Čižmářová 1990; Ludikovský 1971).

Bohunice, distr. Brno-Bohunice

In the area of Žlíbek street, close to the border with Starý Lískovec, a Celtic tomb was discovered in 1947 during construction of the aqueduct, another three were uncovered a year later (excavations by the State Archaeological Institute Brno). From their inventory we know anklets made of hollow cast hemispheres, chain rings (tomb 1), a ring with pea-shaped cast spigots (tomb 2), and fragments of iron fibulae (tomb 3). In 1963–65, according to O. Dobšík’s remarks, six chamber tombs were destroyed in this area.

In the literature, the site is referred to as Starý Lískovec, but it is located in the cadastre of Bohunice (Filip 1956, 393).

Brno-Maloměřice (BM), distr. Brno-město

One of the largest systematically excavated Celtic burial ground in Moravia. During the rescue excavations conducted by J. Poulík from 16 May to 23 June, 1941, at the site “Plíže” a total of 76 graves were uncovered during the construction of a train station for freight trains, at least ten were destroyed.

At the cemetery dated LT B1 and LT B2 (the material of the destroyed tombs also includes some items of LT C1), all types of tombs representing the stratification of Celtic society are represented – except 15 graves of warriors there are also male graves with few grave goods or even with no finds at all. Women’s

graves are also available with rich equipment, as are extremely poor ones. The absolute majority are inhumation burials. Only five cremation burials have been excavated. However, further cremation burials may have been overlooked or not detected during the excavations.

The most important find of this site is the ensemble of bronze fittings that originally belonged to a wooden jug. The significance of this find within the cemetery highlights the fact that it was in the middle of the cemetery and there were no other graves in its immediate vicinity, leading to the conclusion that this site was surrounded by some fencing (ditch?); but it was not possible to find remains that confirm this.

J. Poulík excavated in Maloměřice the largest Celtic burial ground of the 4th and 3rd centuries BC in Moravia. The most important discovery (the unique bronze fittings of a wooden can), however, he missed by a few days. On May 1st, construction workers discovered unusual metal objects during earthworks and called in lay archaeologists F. Adámek and A. Ríčka who excavated the find. The ensemble, which was then bought for its collections by the Moravian Museum, was immediately published by the former museum director K. Hucke, including the reconstruction of the original vessel design. But this had a number of visible mistakes. Therefore, several researchers, including foreign ones, gradually sought more or less successfully for a new reconstruction (O. Klindt-Jensen 1953, A. Radnóti 1957 – he reconstructed the ensemble as fitting a horse yoke). The last reconstruction, carried out by the Brno archaeologists J. Meduna and I. Peškar using all available information, analogies and techniques, probably best approaches the original.

The object itself is one of the finest examples of Celtic crafts. It fascinates with its perfect craftsmanship, as well as with its impressive artistic expression. Inspired by the foot vases, this jug of grandiose shape features a collection of bronze fittings bearing many of the motifs and symbols of great importance to the Celts – the repetitive open-eye motif, the human mask, and the stylized design of a bull's head and of the curled griffin.

The perfection and sophistication achieved, along with the presence of motifs of deep symbolic meaning and the isolated location on the cemetery, indicate that it was an object that may have played an important role in (unfortunately unknown) rites (*Čižmářová 2005; Meduna/Peškar 1992; Poulík, s.d.*).

Holubice (HOL), distr. Vyškov

Due to the number of graves, the largest Celtic cemetery in Moravia. The first La Tène tombs at the site "Dílce" were destroyed by the activity of a clay pit on the southwestern hill above the village at the end of the 19th century. In 1903 the local teacher E. Synek excavated five inhumation graves, ten graves were discovered by the farmer Cerný in 1930; through further excavations, especially by M. Chleborád and A. Procházka, the number of discovered graves increased to 77, without it being clear if the cemetery was completely unearthed.

The Holubice cemetery represents a typical necropolis from the 3rd century BC. The military element is clearly represented here – about one-third of the burials of men have warrior equipment; this finding corresponds to relatively opulent women's graves; a lot of graves, however, have poorer facilities or are without finds. With two exceptions, the dead are upside down in the north, in an extended position, their arms stretched out along the body. The tombs also contain pig bones and vessels which serve as evidence of food added to the grave.

At first view, this large cemetery does not differ from the one in Brno-Maloměřice, which is located about 15 km away. Hence it is the necropolis of a community which must have been in contact with the community buried in Holubice. Under closer examination, however, certain deviations are recognizable. For example, in Holubice not a single piece of sapropelite jewellery was found, while in Brno-Maloměřice these are relatively common (a total of ten pieces). There were also ribbed hollow anklets made of bronze sheet, which are quite common in Brno-Maloměřice. It is interesting that the two cases are objects that are not of local provenance. While sapropelite jewellery was imported from central Bohemia, the origin of the ribbed, hollow anklets are from the Carpathian basin (*Čižmářová 2009; Procházka 1937*).

Horní Heršpice (HH), distr. Brno-město

From the municipal cadastre a total of six sites with La Tène finds are known. At the site "V Pachtech" a settlement from the late La Tène period was unearthed by J. Meduna in August 1960 (*Meduna 1961*) – it

included a settlement pit and close nearby a pottery kiln with two chambers, based on the findings probably still with vessels.

Secondly, about 150 meters south of the site of the latter find ("Na Františku") four La Tène graves were uncovered, but from older subperiods – namely, from the stage LT B1. Most interesting was a double grave in which a skeleton of a young man lying on the stomach was discovered without gifts. Beneath his right shoulder was a small pit containing a child's burial with a Münsinger fibula and a necklace of glass beads (mostly amphora), amber beads, and pierced sea corals. The amphora-shaped pearls are the most northerly discoveries of their kind and refer to the period of the older La Tène time of contacts of the Moravian Celts with the territory of the Carpathian Basin. The area in the examined site was already so destroyed that it was not possible to find further graves. With regard to the great distances between the rescued tombs, one could rather conclude this was a complex of two or even several graves or groups of tombs, rather than an extraordinarily extensive necropolis.

Another single LT B1 inhumation burial was found about 2 km to the south (Čižmářová 2004; Čižmářová/Geislerová 1990; Enderová 1994; Meduna 1961; 1970).

Hoštice (HOS), distr. Vyškov

In 2002, 20 La Tène graves were excavated within the cadastre of Hoštice during rescue excavations before the construction of the D1 motorway on the stretch Vyškov-Mořice. The site is located on a ridge that drops slightly northward and follows the course of the Haná river, especially in the area bordered on the east by the Pruský brook and to the southwest by Hoštice-Rybníček street (Bálek et al. 2003, 140; Čižmářová 2013).

Křenovice (KRE), distr. Vyškov

In 1931, the first La Tène period inhumation was excavated in the field at the site "Přední díly". A year later, A. Procházka excavated a Celtic cemetery with three cremations and 35 inhumation graves (two of them were double graves, the skeletons were buried separately on top of each other and may not be from the same time; another atypical burial is a body lying upside down). The equipment of the warrior grave no. XX differs from the others by the unusual finding of two powerful *Eberhauer* (teeth of a wild boar), which were provided with a bronze spout and an iron eyelet. Furthermore, in this grave two thin pendants, ones which lay between the legs, were found along with an especially small anthropomorphic sword. Also interesting is a sapropelite ring in the inhumation grave no. VI – these pieces of jewellery are mostly found in women's graves. The orientation of the corpse buried in tomb XXV with the head to the south, as well as the massive arm ring from tomb I, with pseudo-filigree decoration, attest to influences from the area of the Carpathian basin (Čižmářová 2009; Procházka 1937).

Lovčičky (LOV), distr. Břeclav

In 1957, a La Tène cemetery was excavated by K. Ludikovský that evidently belonged to an early La Tène settlement. The burial ground consisted of 17 N-S oriented inhumation graves. According to the anthropological analysis of the skeletal material, there were seven male, seven female, and two child graves. The sex of one could not be determined. Quite interesting is the fact that none of the male graves was armed with weapons. In the area of the burial ground, an early La Tène settlement of LT A with typical ceramic material, including stamped ceramics, was also identified (Čižmářová 2013; Meduna 1980a).

Marefy (MA), distr. Vyškov

The burial ground, which was excavated by M. Chleborád in November 1928, is known in the literature as the site "U lišek" in the cadastre of Bučovice. However, this is a mistake that probably arose from an inaccurate understanding of the (genuinely misleading) title of Chleborád's publication "Gallské pohřebiště u Bučovic". The first to be misled by this title was A. Procházka, who called the site "Bučovice"; this is all the more surprising in that Procházka then worked in the nearby Černčín and knew the region perfectly.

All subsequent authors then took over Procházka's view (certainly Filip 1956, 393; Meduna 1980a, 60), probably because of the good accessibility of Procházka's publication in comparison with the publication

of Chleborád. But Chleborád himself wrote quite specifically: *Hrobiště to je v obvodu kat. území vsi Maref při bučovské hranici, na kraji pole p. č. 1072, patřícího rolníku z Maref č. 1 Františku Stuchlíkovi a je v rohu, jež tvoří silnice, běžící od Bučovic ke Slavkovu a silnice, jdoucí k Letonicím* [‘This cemetery is located in the cadastral area of the village Marefy on the border with Bučovice, on the edge of field no. 1072, that belongs to the farmer from Marefy no. 1, František Stuchlík, and is located in the corner that forms the road that leads from Bučovice to Slavkov and the road that leads to Letonice’] (*Chleborád 1930, 4*). A further specification of the excavation site (not of the cadastre) is given by A. Procházka: *Nedaleko samoty “U lišek”, v úhlu severozápadním, který tvoří vyústění letoňské silnice do silnice slavkovsko-bučovské* [‘Not far from the wasteland “U lišek”, in the north-west corner, which forms the estuary of the road from Letonice to the street Slavkov-Bučovice’] (*Procházka 1937, 64*). The only one who mentions the place under the correct name after M. Chleborád is I. L. Červinka, unfortunately in the unpublished and undated manuscript of his work *Galové*. Part of this cemetery is undoubtedly the grave which was explored by S. Stuchlík in 1974, after the grave had been carved on the extension of the state road in the section Slavkov-Bučovice and the related preparations of the northwest slope. K. Ludikovský, who elaborated the tomb, described the site as “Letonice”. M. Chleborád unearthed 19 LT tombs at the necropolis, all except one cremation grave were inhumation ones. The original publication of Chleborád documents the orientation of the graves in the direction of N–S (the author literally writes: *Všechny kostry ležely hlavou k severu, nohama k jihu* [‘All the skeletons lay with their heads north, their feet facing south’]; *Chleborád 1930, 4*), but A. Procházka, in his much better known and quoted publication, mentions that the graves were oriented E (head)–W. However, this would be a very unusual orientation in our field and a rather high number regarding comparable cemeteries. La Tène graves here are oriented in an absolute majority towards N–S (with small deviations); the E–W orientation rarely has weapon-equipped graves. The question then arises as to with which error or mistake this essential disinformation originated. It seems that Procházka’s inattention when reading the descriptions, in which Chleborád often mentions the head turned to the east, but in the sense of the orientation of the face, not the skeleton. Unusually high, however, is the percentage of deceased persons in a non-standard position (stool position and on the side) – of the total number of 18 inhumation burials, there are six, (i.e., one third). The necropolis of Bučovice was examined by the experienced terrain researcher Miroslav Chleborád, so it was no amateur excavation. In addition to the careful measurement of the necropolis, Chleborád systematically gives the basic information on individual graves (shape of the burial pit, their orientation and dimensions, position of the skeleton, dislocation of the finds, etc.). The publication also contains schematic sketches of the findings of some graves or their photographs. During the exploration of the burial ground, Chleborád excavated four tombs in situ (tombs nos. 2, 8, 12, 14) for later presentation in the exhibition – one of them, tomb no. 12, can still be found in the permanent exhibition of the Bučovice Museum (*Chleborád 1930; Čižmářová 2013; Ludikovský 1975, 37, 38; Procházka 1937, 64–68*).

Nížkovice (NIZ), distr. Vyškov

The site is located on the hill west-northwest of the village at the “Záhumenice” site, on the left of the road from Slavkov to Kyjov, on a moderate, eastwardly sinking slope at 290 m above sea level. Between 1907 and 1933 18 La Tène inhumation graves were discovered; the first ones were disturbed during the construction of the branch from the main road to Nížkovice in 1907 (tombs nos. 1–5), others were explored by A. Procházka in adjoining fields to save the finds (graves nos. 6 and 7 in the years 1908 and 1920). Later, after exposing and examining grave no. 8 in 1927, Procházka systematically excavated another nine graves in a short period from the end of August to the end of September (nos. 9–17).

Im Herbst 1907 begann man am Kreuz mit dem Aufbau des Abzweigs von der kaiserlichen Straße durch die Flur „Záhumenice“ in Richtung Dorf. Beim Abteufen des seichten Hohlwegs wurden mehrere keltische Gräber entdeckt. Ich durchgrub in jenem Jahre einige davon und setzte die Ausgrabung des Gräberfelds auch außerhalb der Straße auf anliegenden Feldern im Jahre 1927 fort, nachdem fast jedes Jahr davor bei verschiedenen Feldarbeiten zufällig neue Gräber entdeckt worden waren (*Procházka 1937, 89*). Procházka does not state explicitly on which side of the street the graves he studied were located, but it seems that they were on the right, that is, the southern side. In this area he did not discover any other graves and presupposed their existence on the other (i.e., northern) side of the street. According to him, other graves were undoubtedly added, “because some were found by chance by various explorers and grave goods were distributed to antiques collectors in the area”. Procházka does not mention grave no. 18 in the publication “Gallská kultura” [‘Gallic Culture’], however, his description appears in his archive. It is not dated, so the date of its excavation can only be

approximated to the time between the appearance of the publication in print (in the course of or towards the end of 1936) and Procházka's death in April 1940 (Čižmářová 2013; Procházka 1909; 1937).

Ponětovice (PON), distr. Brno-venkov

The large La Tène necropolis was excavated here in 1936 by J. Poulík at the site "Podíly". Four inhumation graves of the older La Tène period were excavated (LT B, dated mainly by means of fibulae with a free foot), but mainly 35 cremation graves that date back to the 2nd century BC. They belong to LT C1, mainly due to the numerous fibulae of the middle La Tène construction. Of interest is the superposition of an inhumation grave by a cremation grave.

In often relatively spacious (up to 200x150 cm), oval pits, burned bones were associated with objects and vessels that have also been burned. Remarkable in the ensemble are above all the completely iron worked jewellery (fibulae and bracelets), but also equipment of weapons – i.e., belt components and a decorated scabbard with engraved stylized dragons. Interesting is the find of iron scissors; There are also remains of glass arm rings. A specialty of the cemetery is the strong deformity of the iron swords, which is to be interpreted as destruction of the weapon for ritual reasons (Čižmářová 2011; Meduna 1962a).

Pustiměřské Prusy (PP), distr. Vyškov

This site is also referred to in the literature as Německé Prusy and Vyškov. Under these names, the finds are deposited in the Moravian Museum. This information was corrected by J. Meduna, who in addition to the older publications also referred to the Excavation Diary and the report of J. Poulík. Later, M. Čižmář supplemented the knowledge of the place of discovery with a plan subsequently discovered in the archives of the Moravské Zemské Muzeum (MZM). At the site, which was disturbed in 1939 by groundwork during the construction of the airfield near Vyškov, J. Poulík excavated a cemetery with about 20 graves (17 graves were systematically excavated, two were destroyed during construction but taken by archaeologists), and another at least two to four destroyed tombs were later found, and there is only a single cremation grave listed. The analysis of the material testifies that the necropolis was used for a long time – the oldest graves belong to the horizon of the Duxer fibulae (LT B1), most of them are placed in the horizon of the fibulae with a large ball at the foot (LT B2), and one tomb also represents the very youngest La Tène period horizon with fibulae of the middle La Tène construction (LT C1; Čižmář 1970; Čižmářová 2013; Meduna 1962b).

Šlapanice (SLA), distr. Brno-venkov

In 1934 J. Poulík excavated at the site "Široká pole" two inhumation graves with finds (1, 2), according to the report of I. L. Červinka (report no. 148/45, archive of AI Brno) also a third, undiscovered grave; there is no note about it in Poulík's diary. In 1937 V. Dvořáček explored another inhumation burial. J. Skutil reported briefly on the finds, and A. Procházka provided inaccurate information. Later, J. Filip listed the graves from this reference in his list of Moravian cemeteries, which also showed some finds. In his list, he also named J. Meduna, who, however, in an agreement with I. L. Červinka, listed a total of four tombs, including the discoveries by Dvořáček, outside this site. J. Poulík described in his diary both graves as follows: *Grave no. 1 was on the property of Mr. Al. Šamšula from Šlapanice (found on 29 September 1934). It lies in the clay in the direction of the north to the south. The length of the grave pit is 2.70 m, the depth 1.50 m, the width 1 m. The skeleton was totally marbled. On the feet (the anklets) a completely preserved amphora-shaped red vessel could be found. On the head a bowl was placed, also completely made of the same, somewhat darker material. Grave goods: 2 bronze anklets, 2 bronze bracelets, 2 lignite rings, remains of some iron fibulae, bronze necklace with amber pendant. Despite a systematic search, no further graves were found, but the above-described cemetery with graves of the Bell Beaker Culture was found. The second Gaulish tomb was found between Aunjetice tombs on the property of Mr. Fr. Páral (no. 3212/1). Depth of the tomb 1 m. Length of the grave pit 3 m. Skeleton in supine position from south to north. Head to the north. Arms along the body. On the shoulder pieces of iron were found, probably from a fibula. Very poorly preserved skeleton. Remains of a crumbled iron-bracelet at the right hand. Skeleton length 160 cm. At his feet a heavily damaged amphora-shaped, black polished vessel was found, which was covered with a (completely preserved) bowl.* A plan of the graves was attached to the description of the tombs, and in the description we also find two bronze fibulae, which J. Poulík forgot to mention in the text of his own grave description (Čižmářová 2011; Filip 1956; Meduna 1980a; 1980b; Procházka 1937; Skutil 1941).

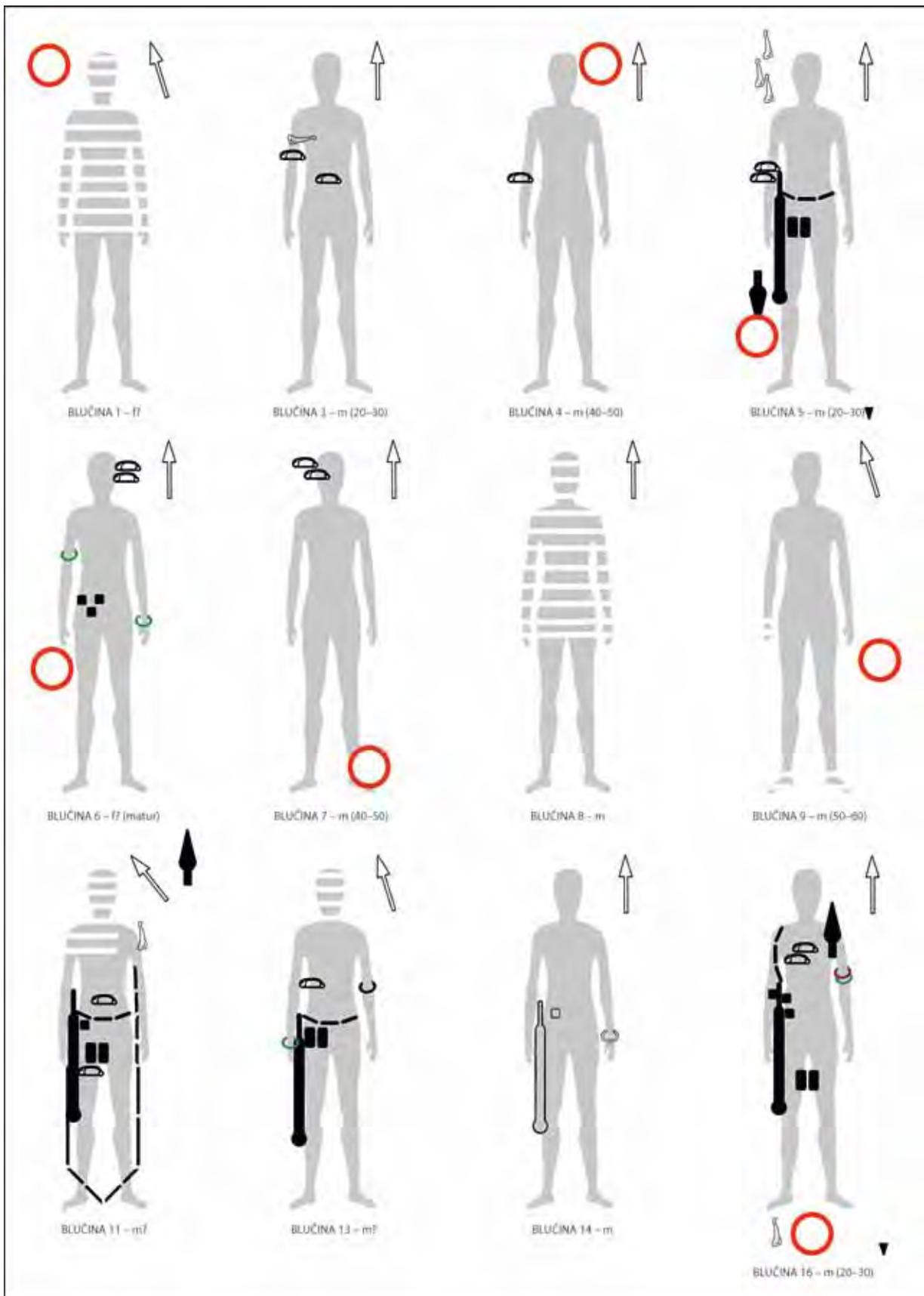


Fig. 17. Schematic graphics of the burials in Moravia.

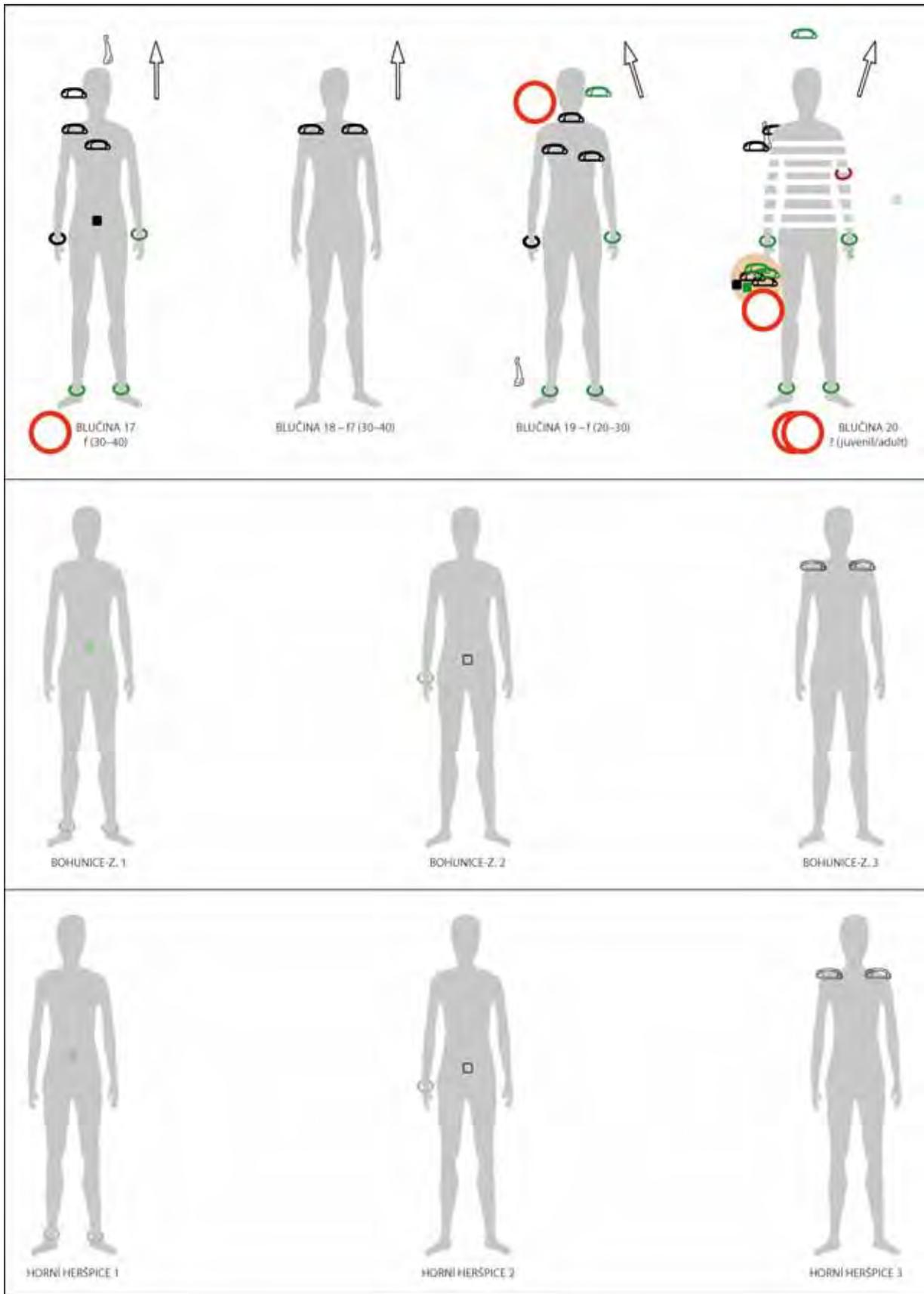


Fig. 17. Continuation.

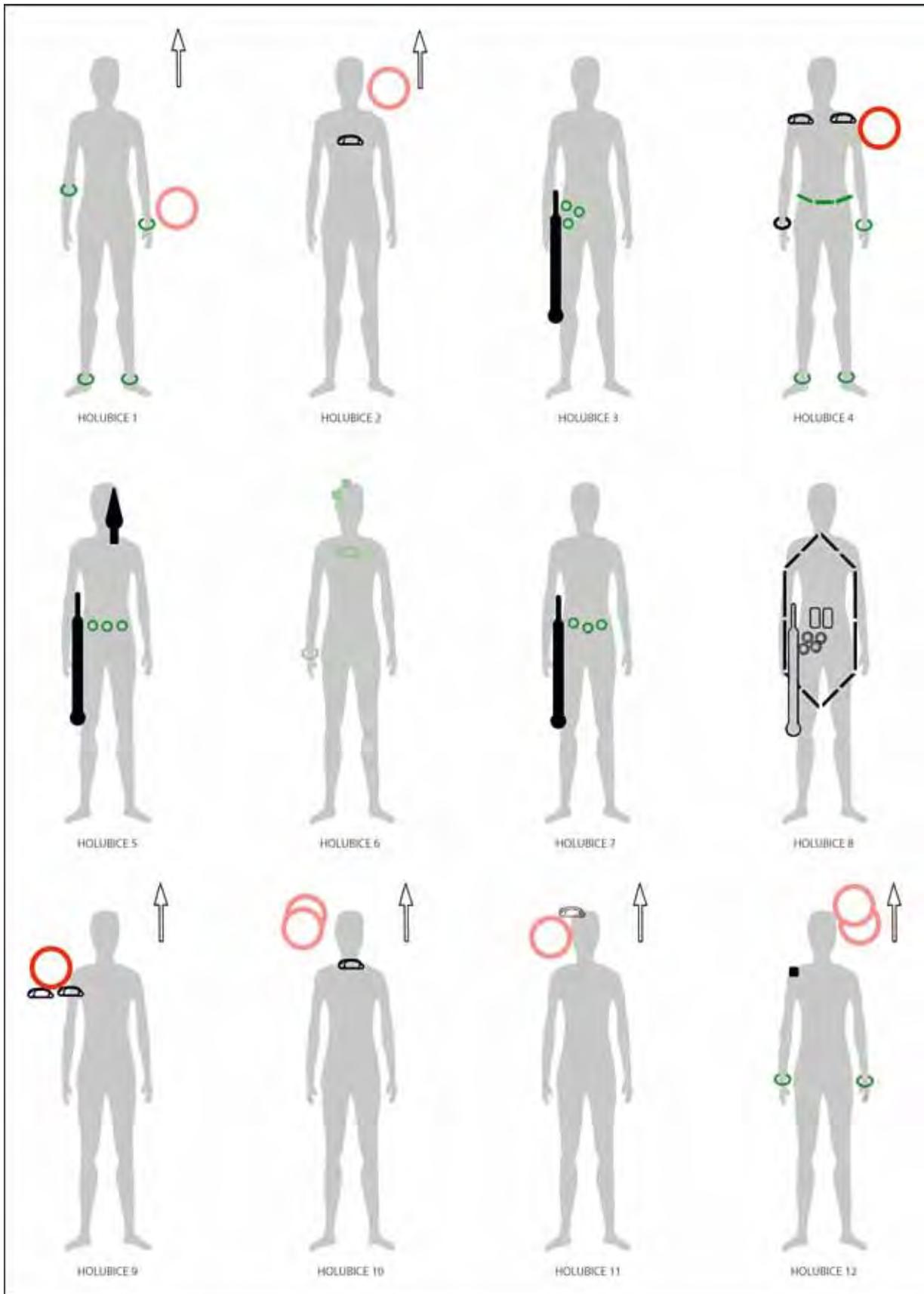


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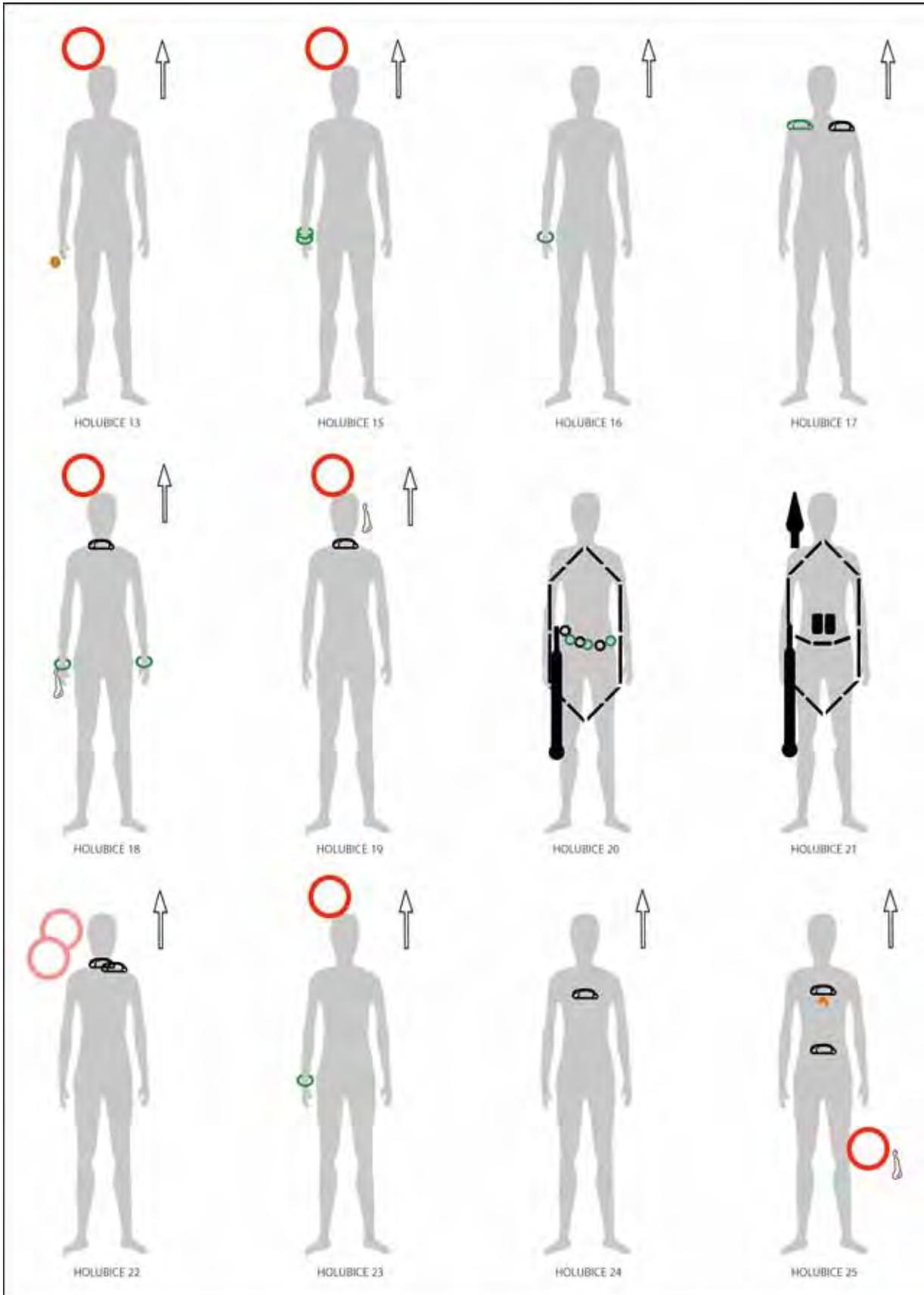


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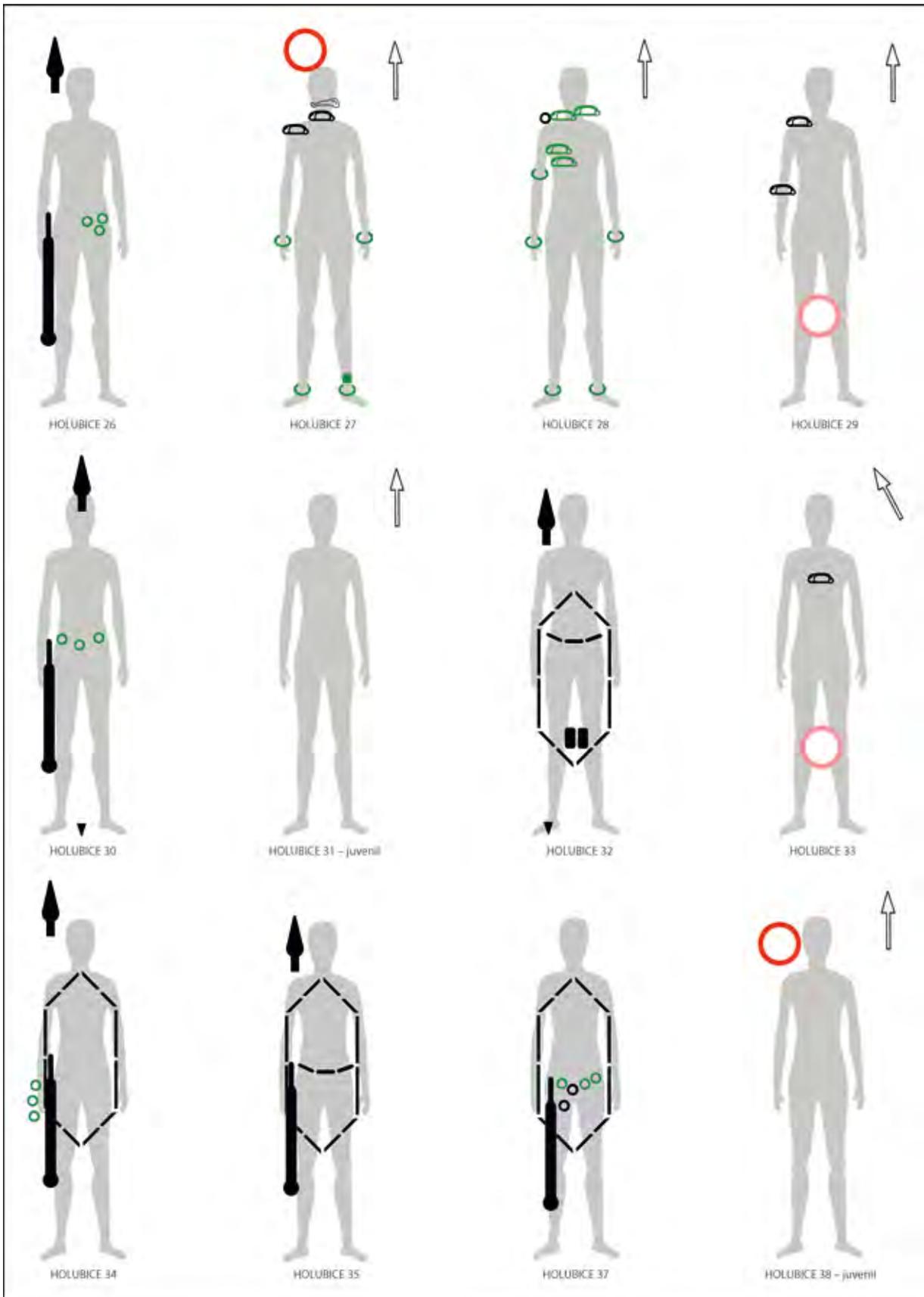


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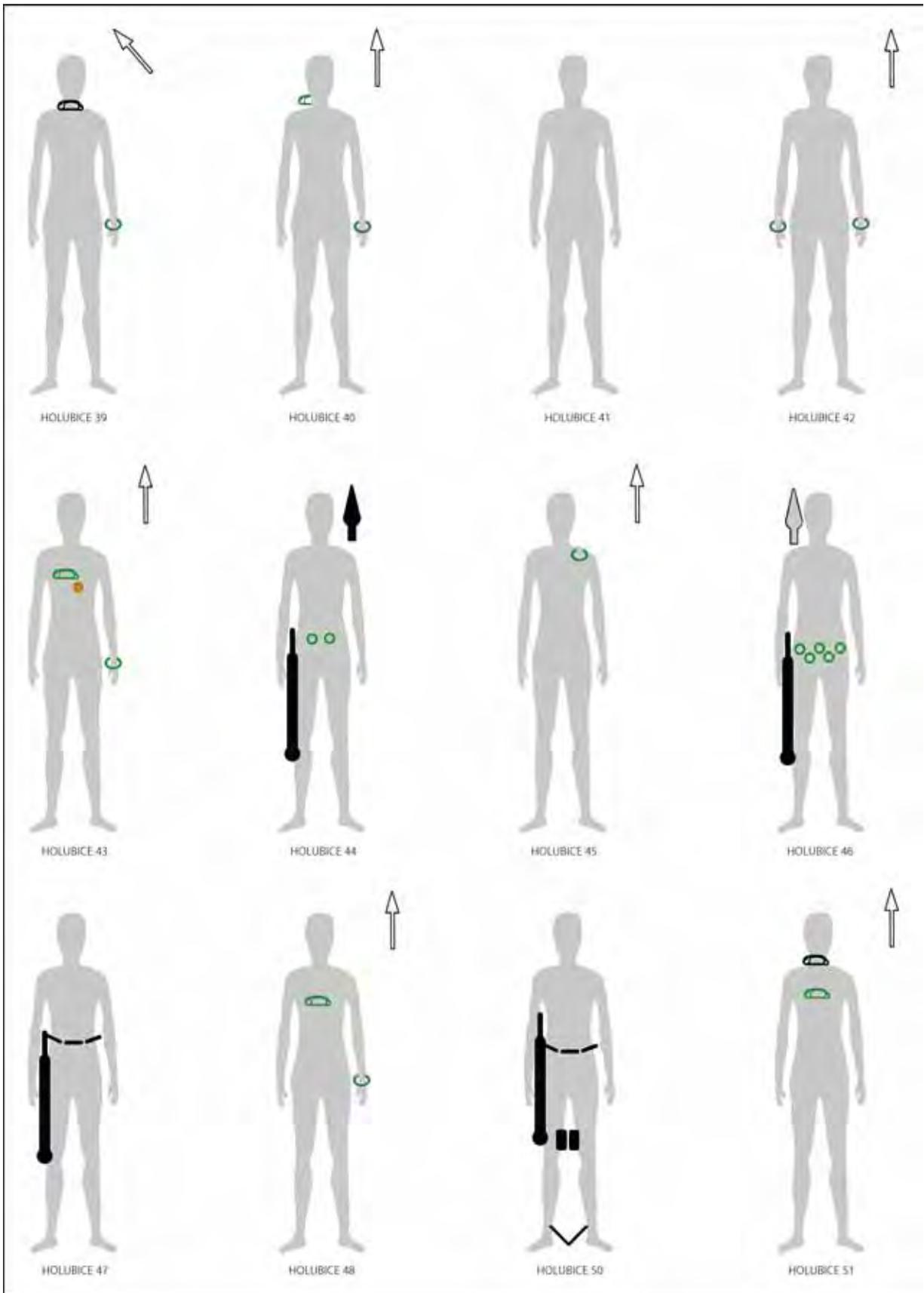


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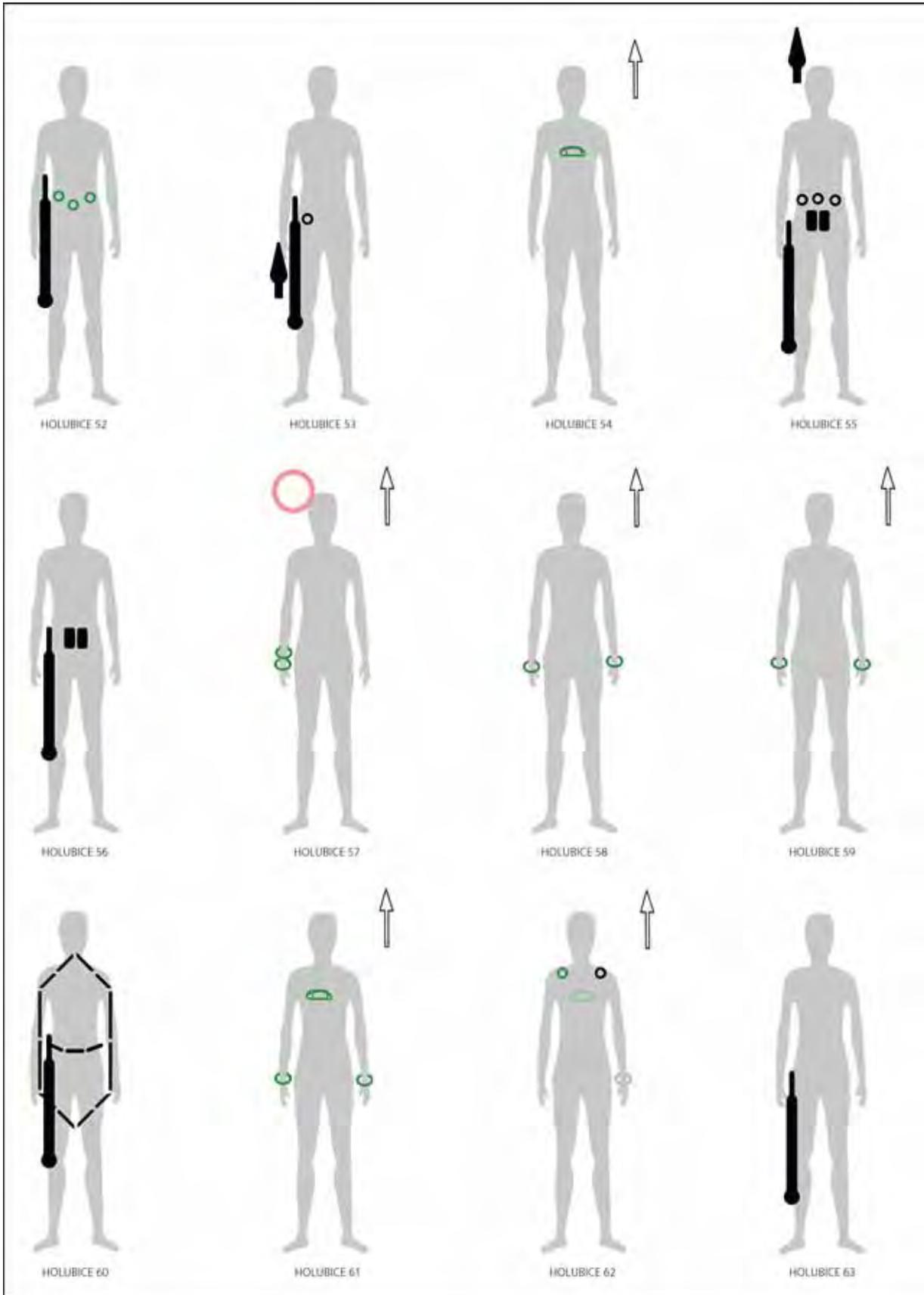


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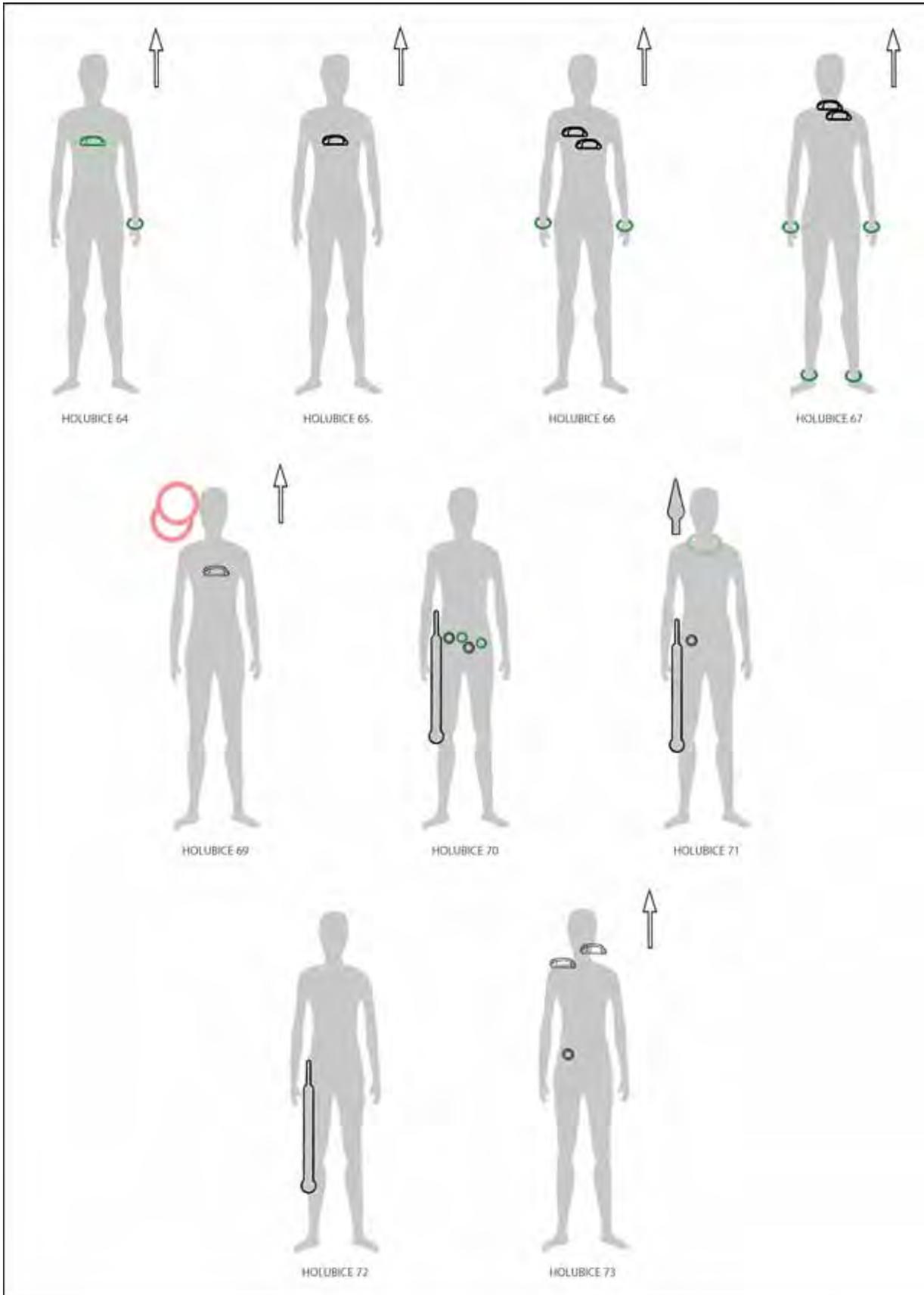


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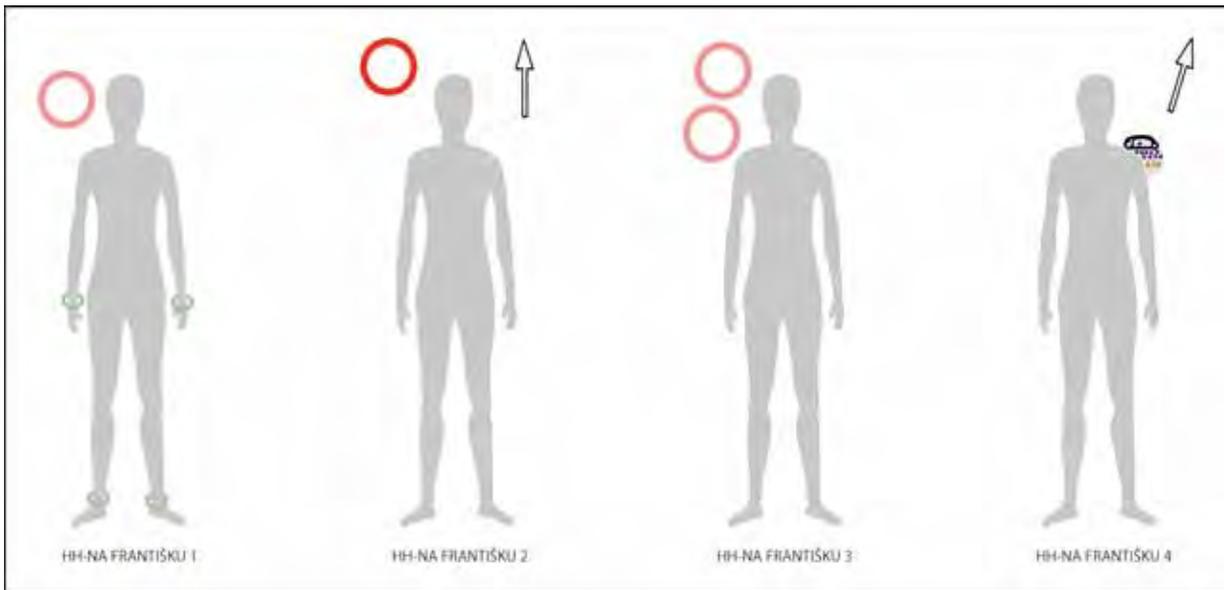


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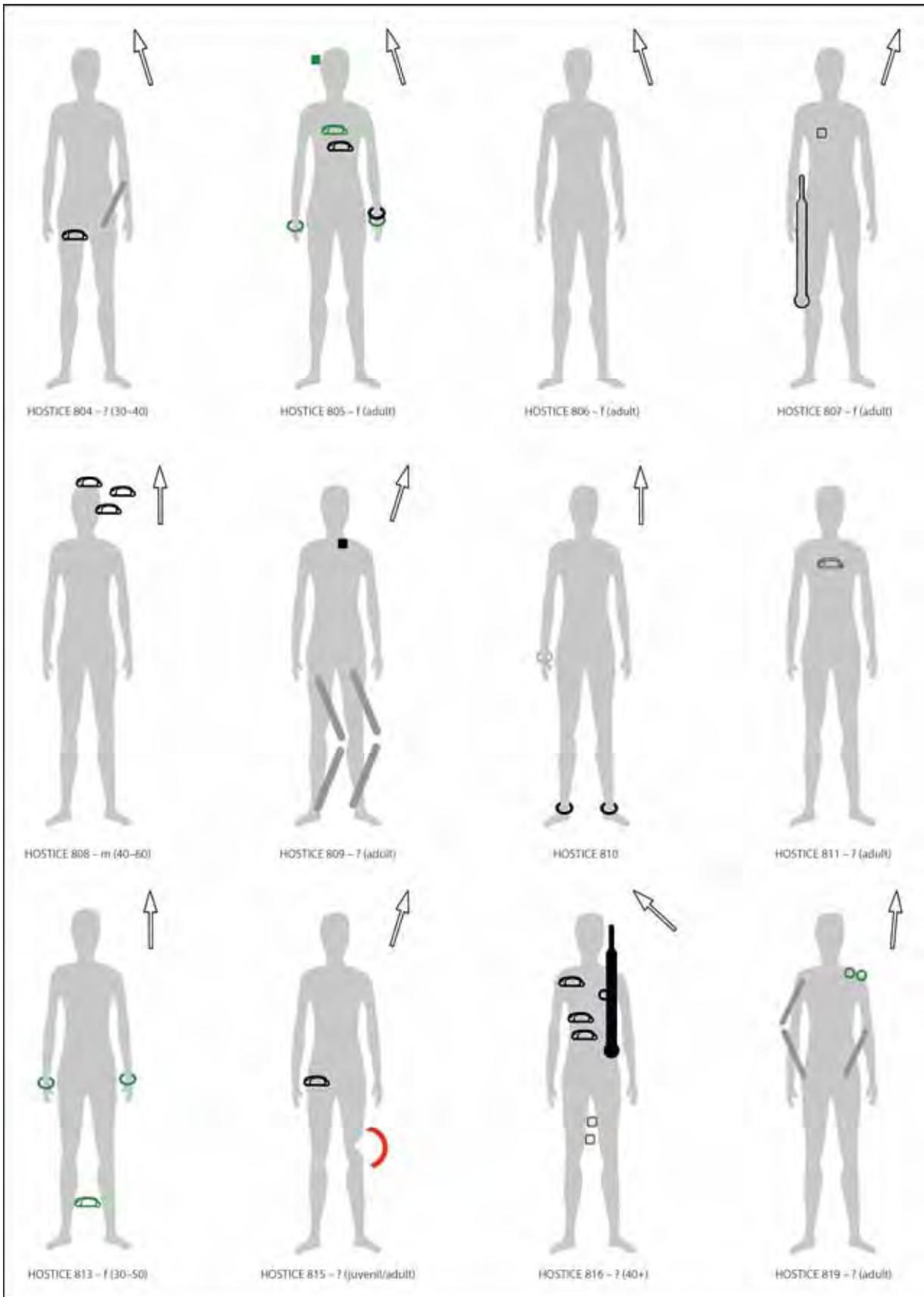


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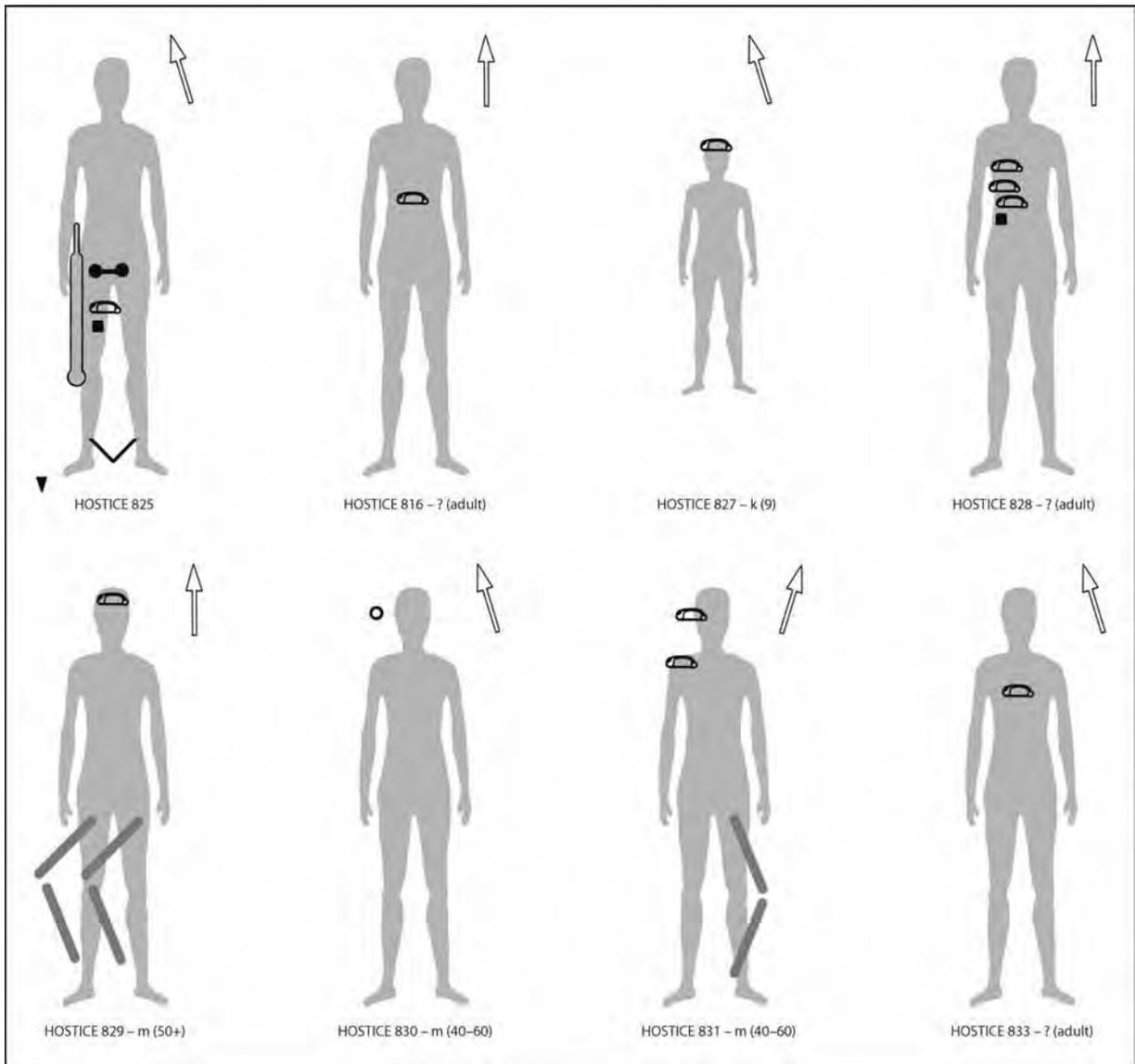


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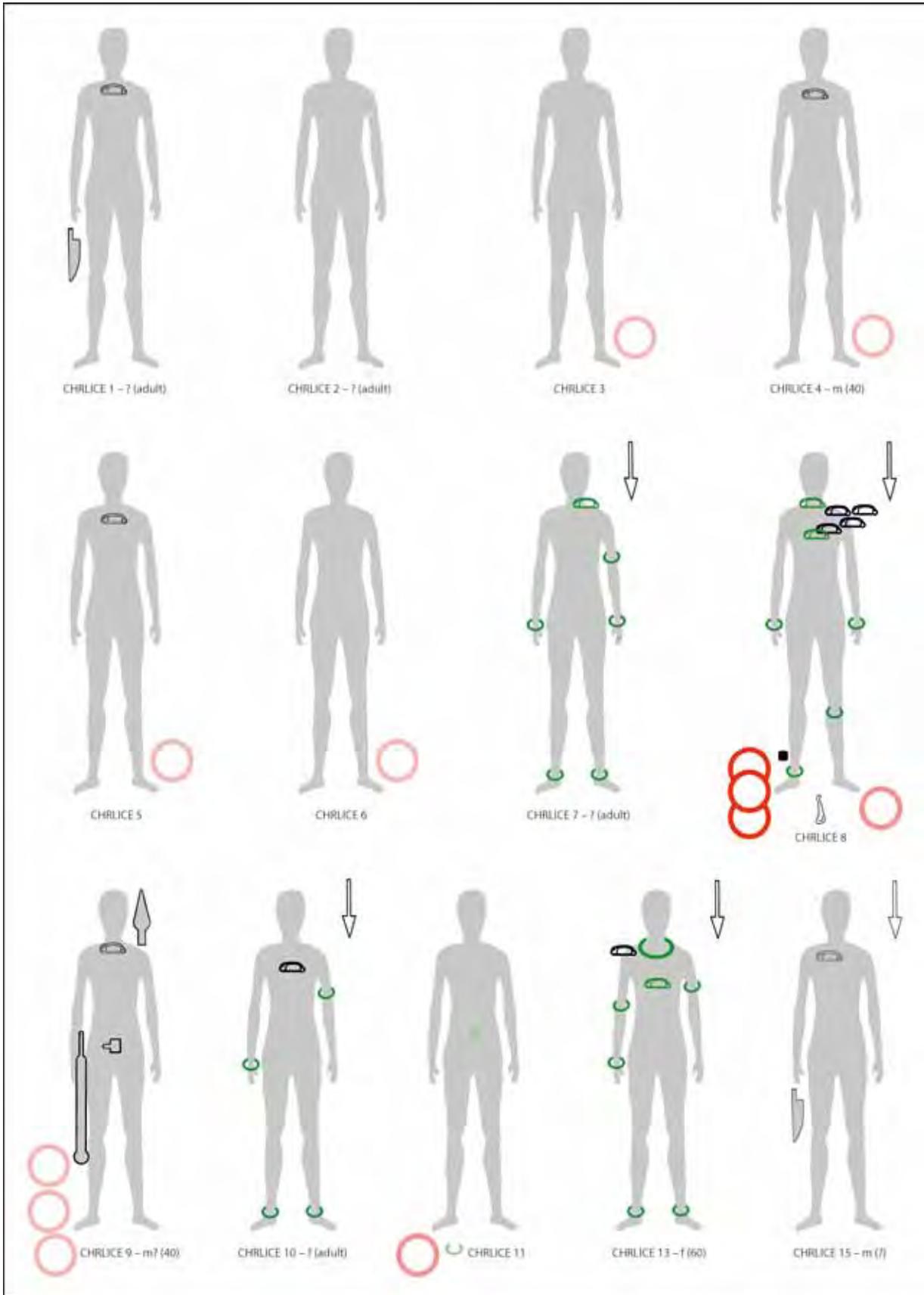


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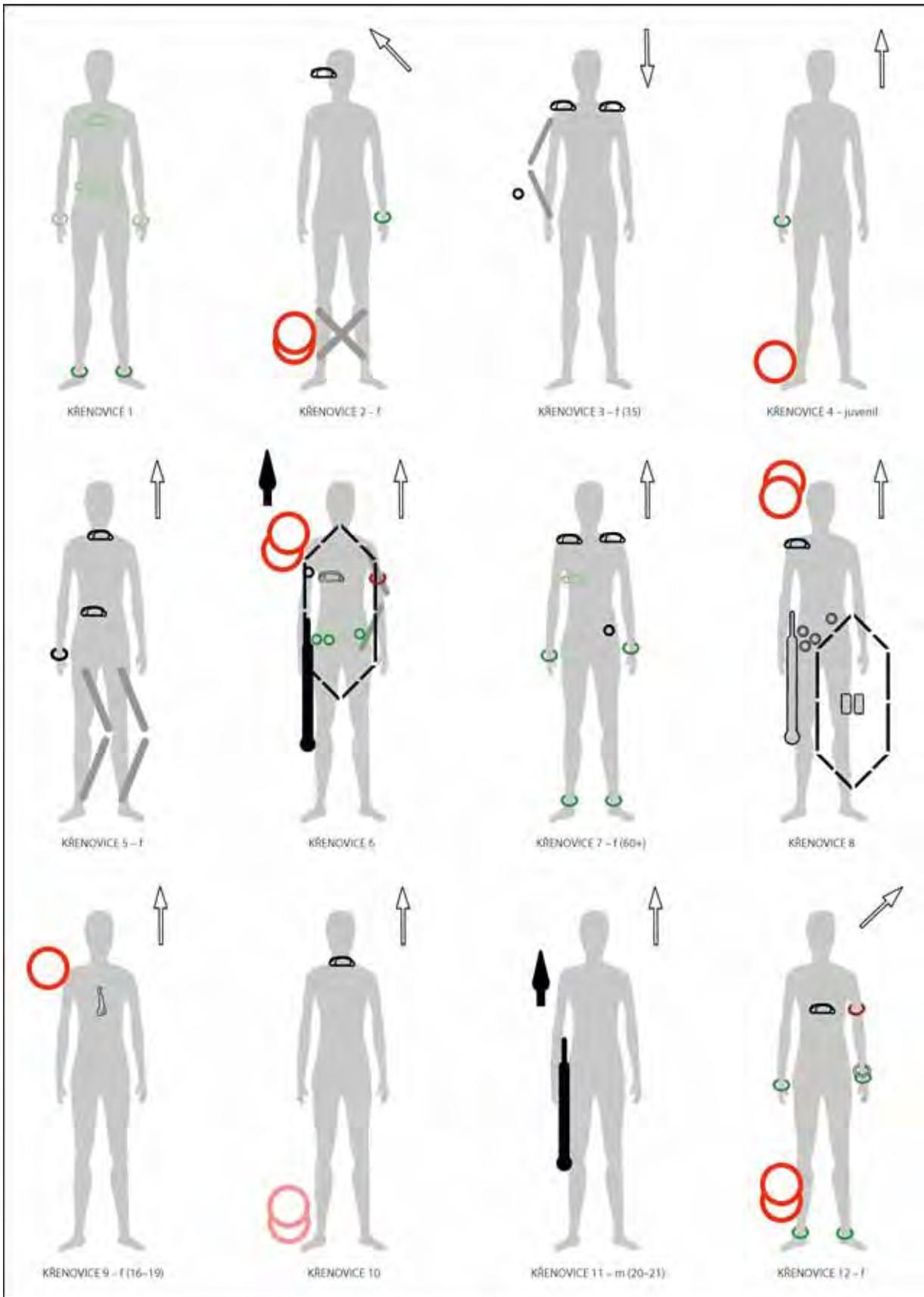


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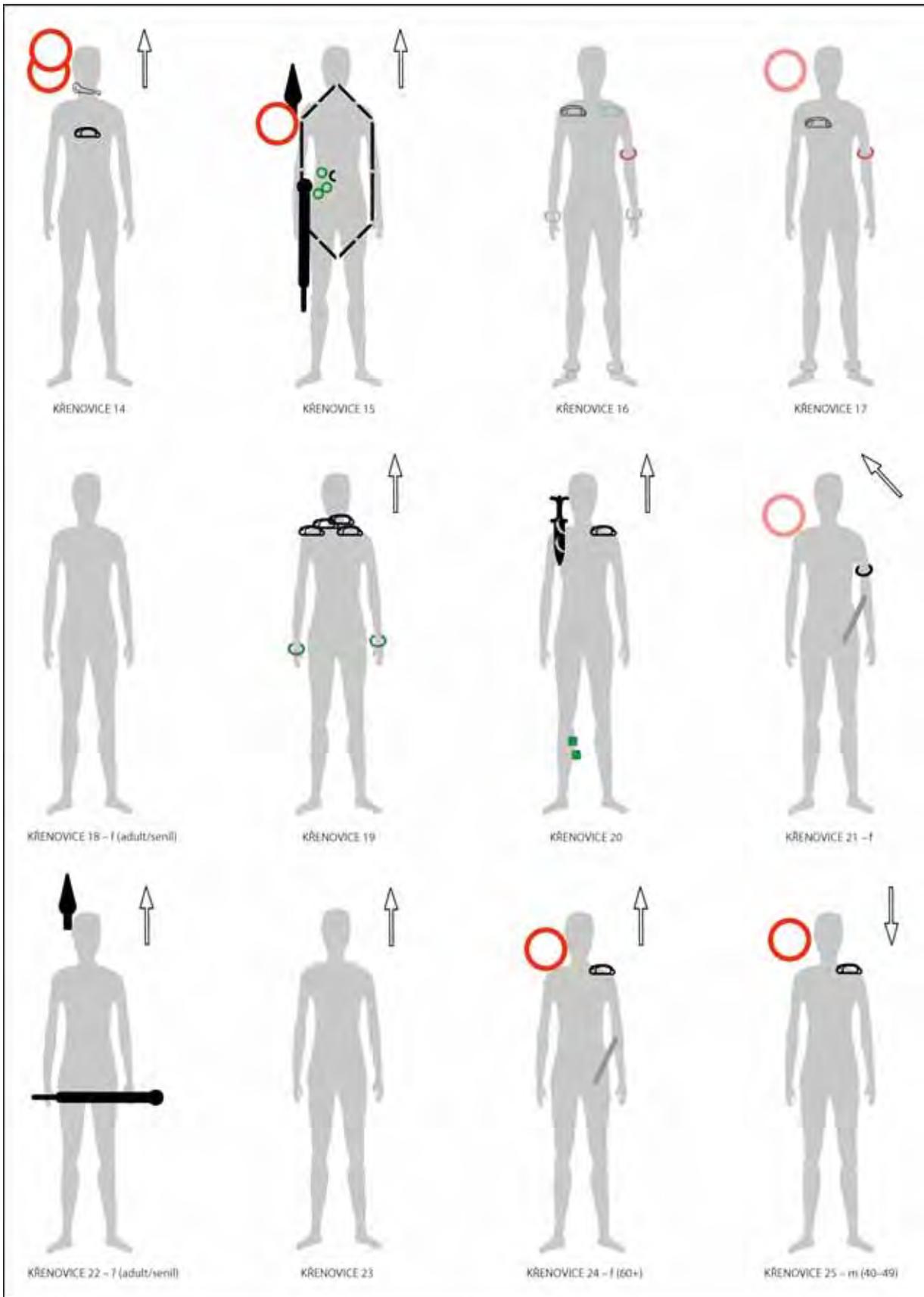


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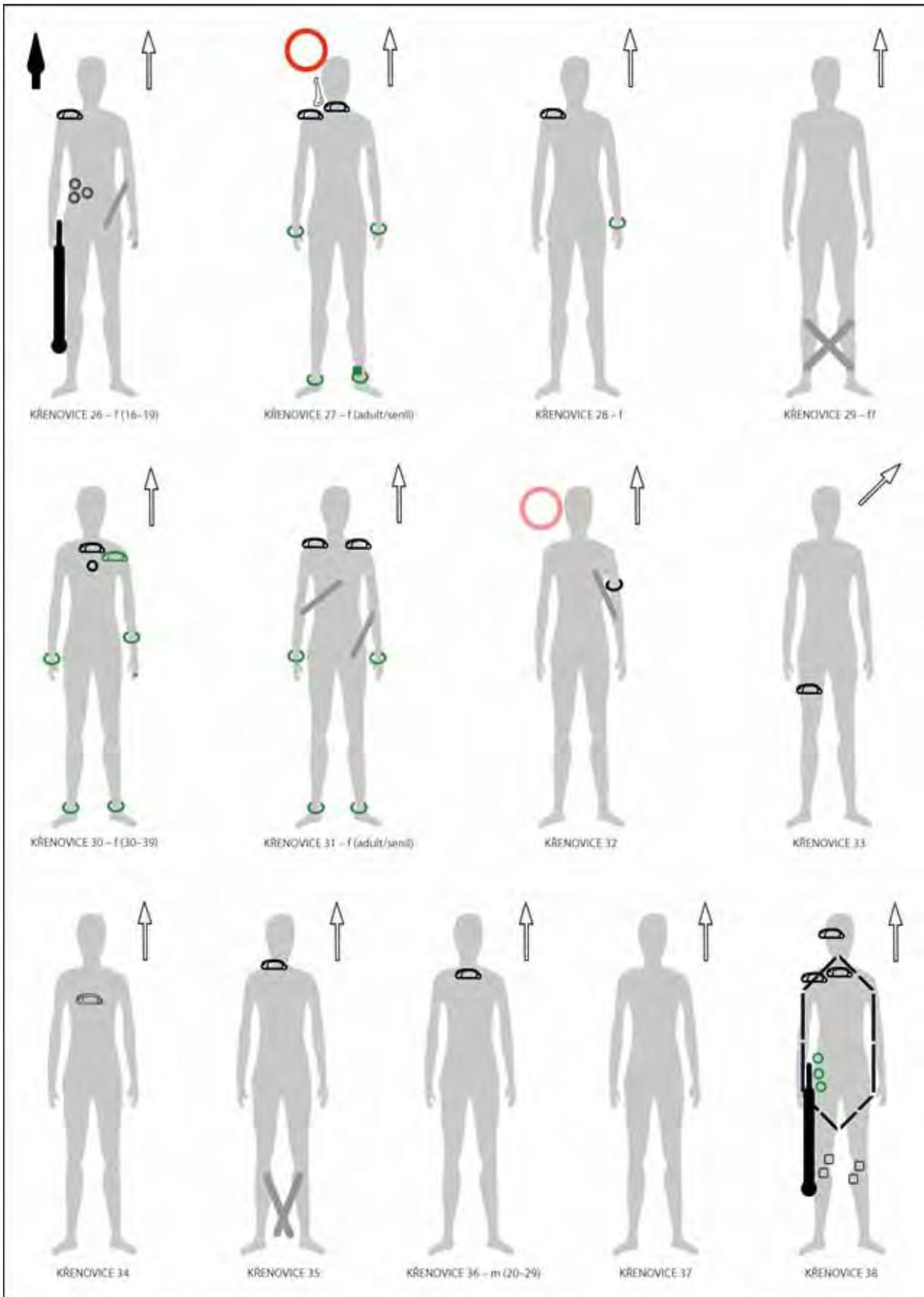


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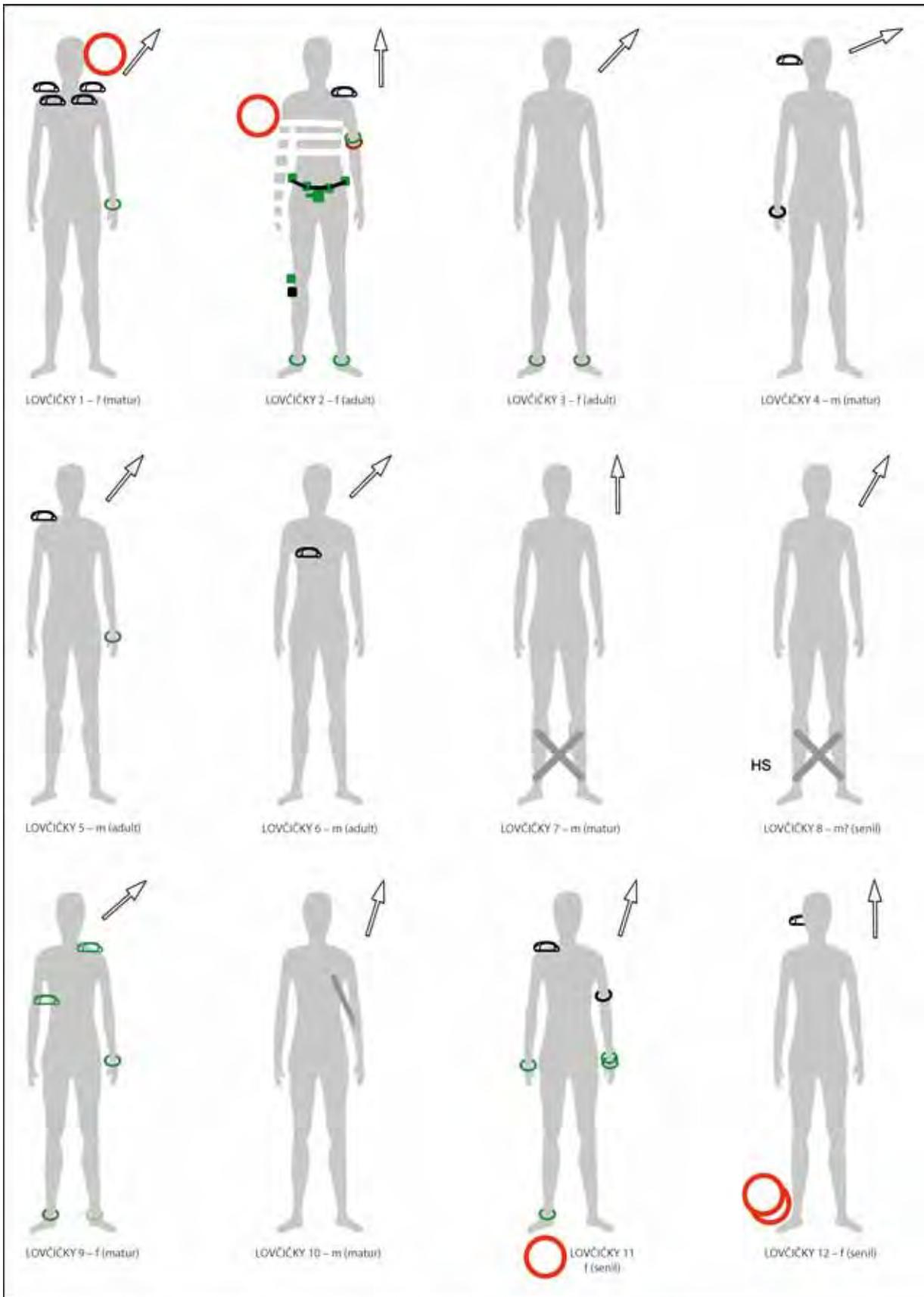


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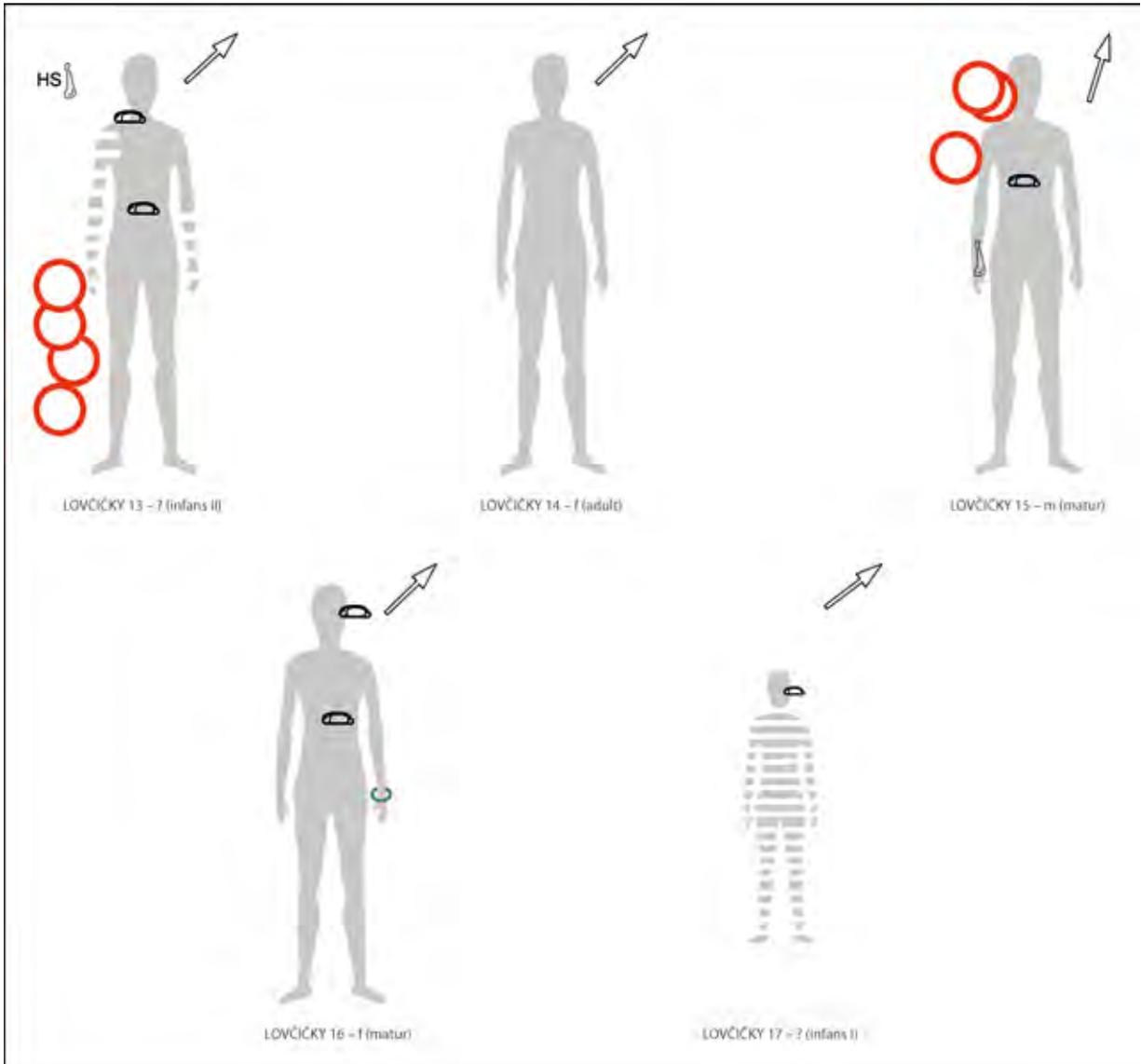


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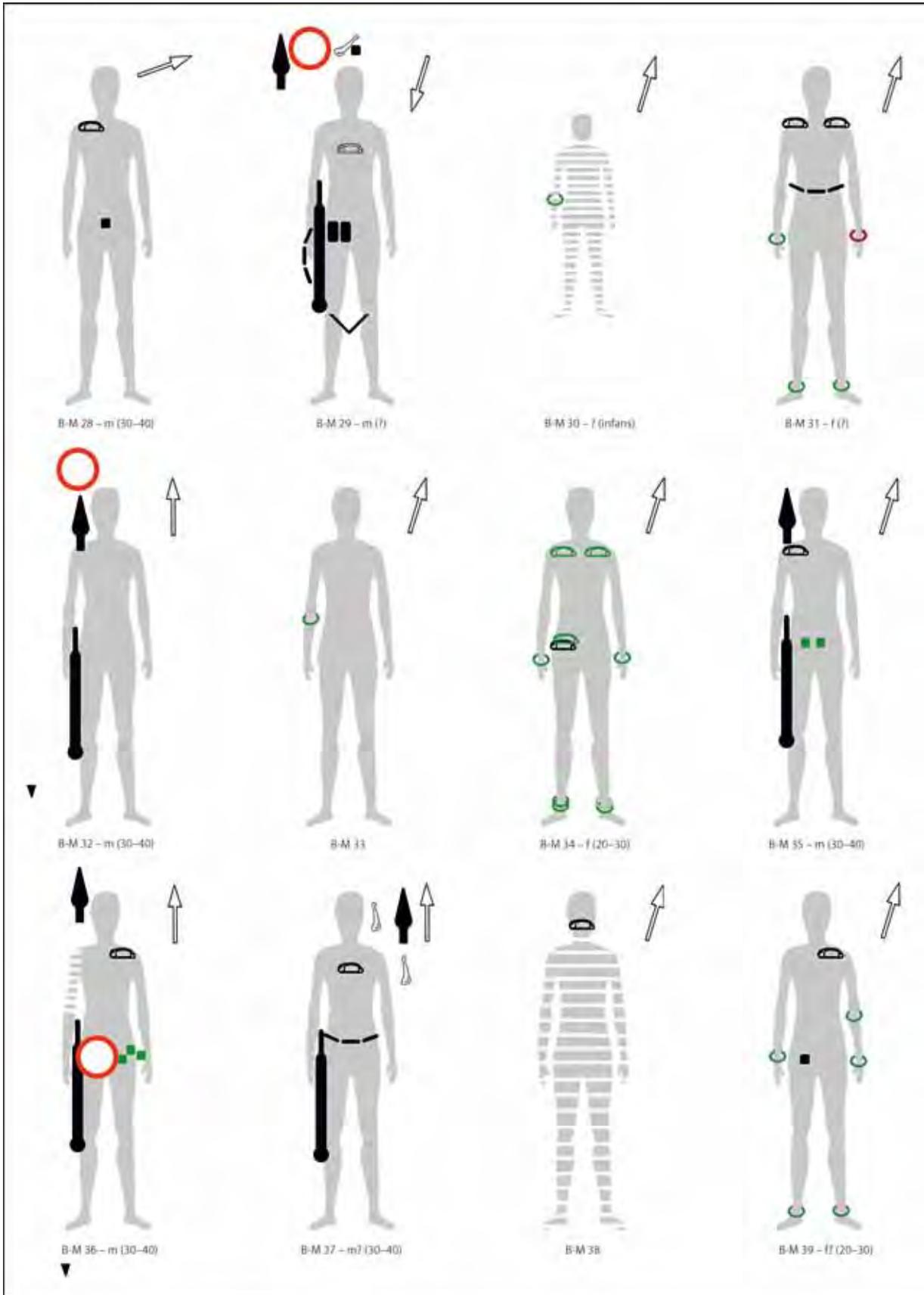


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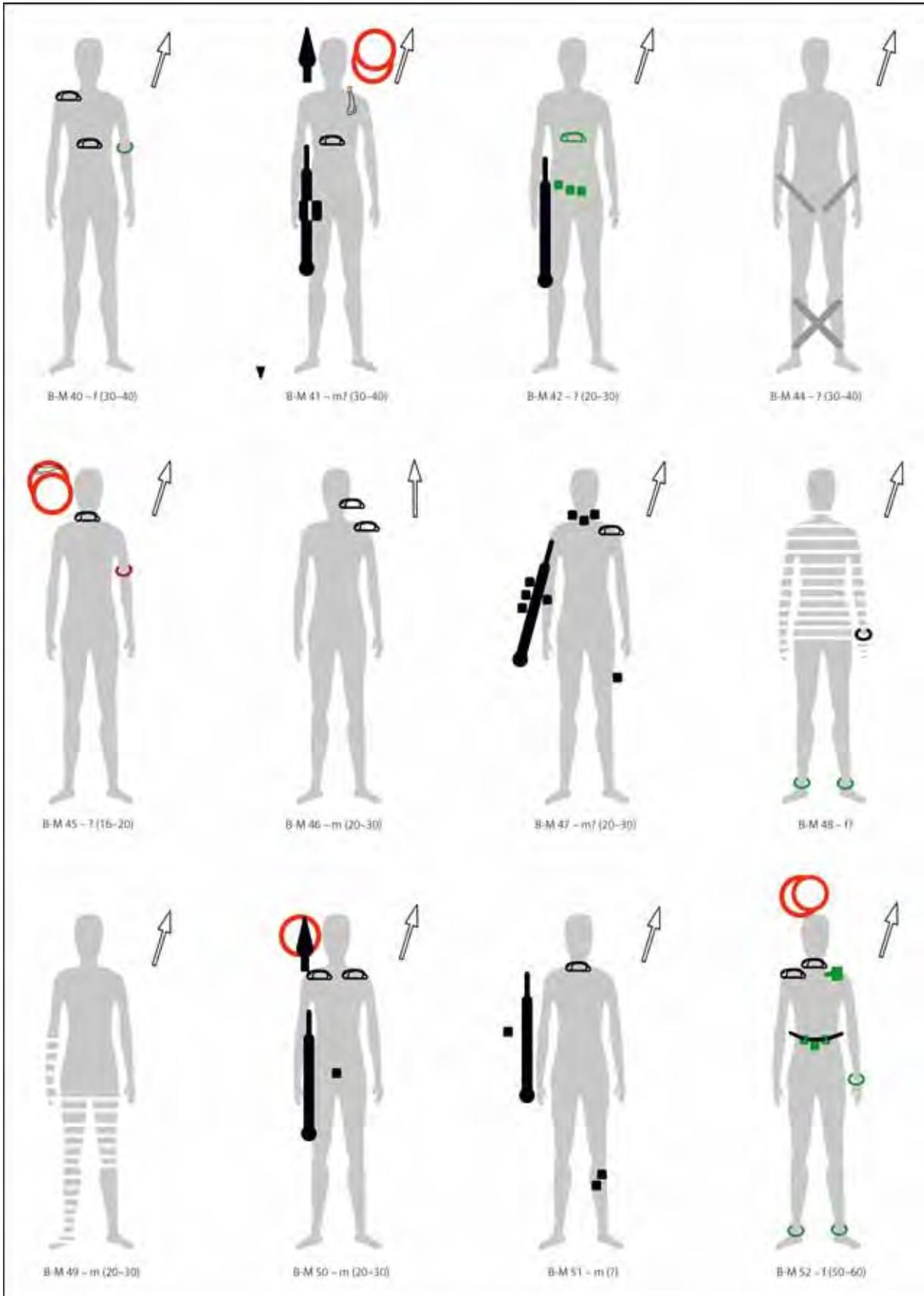


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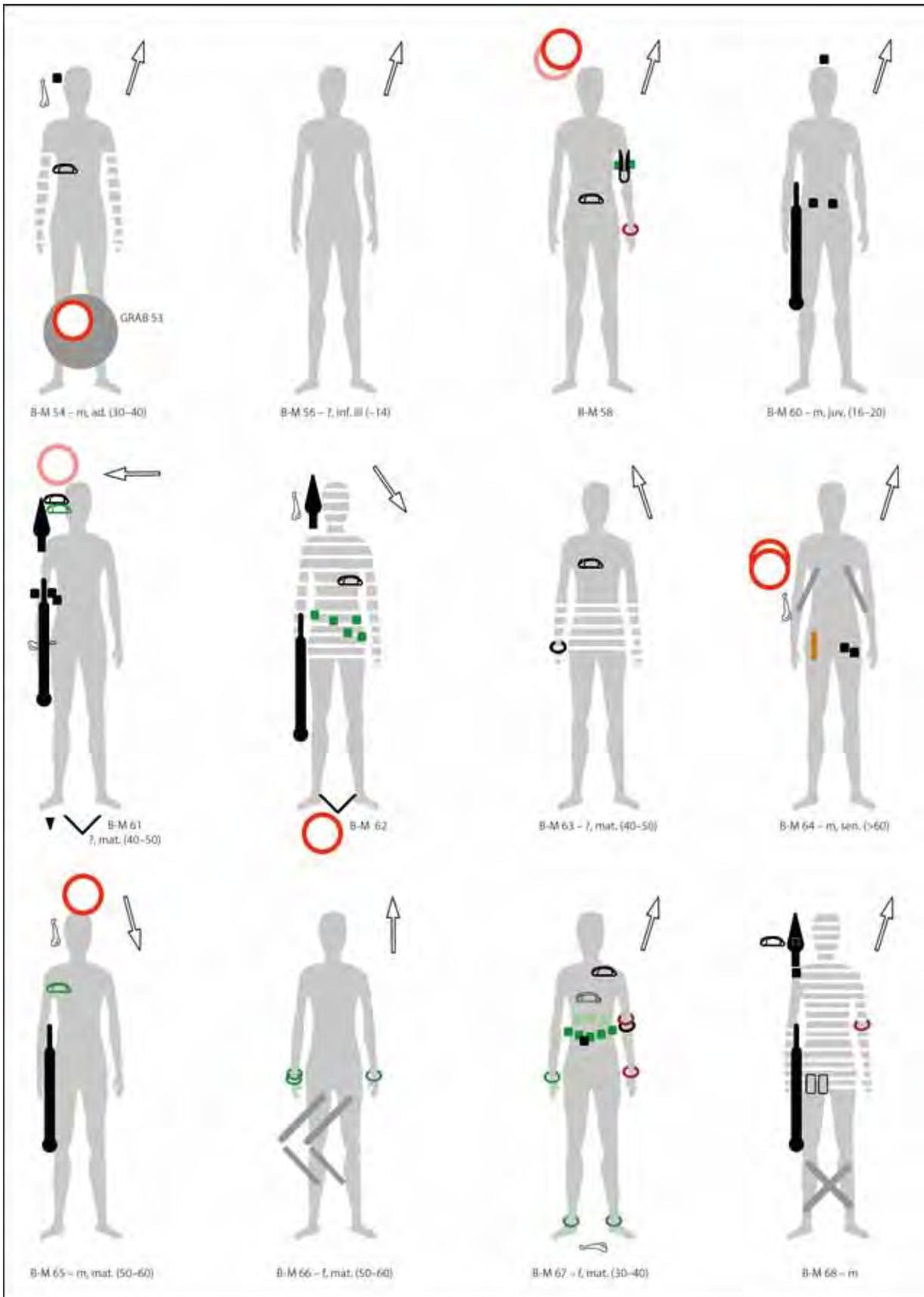


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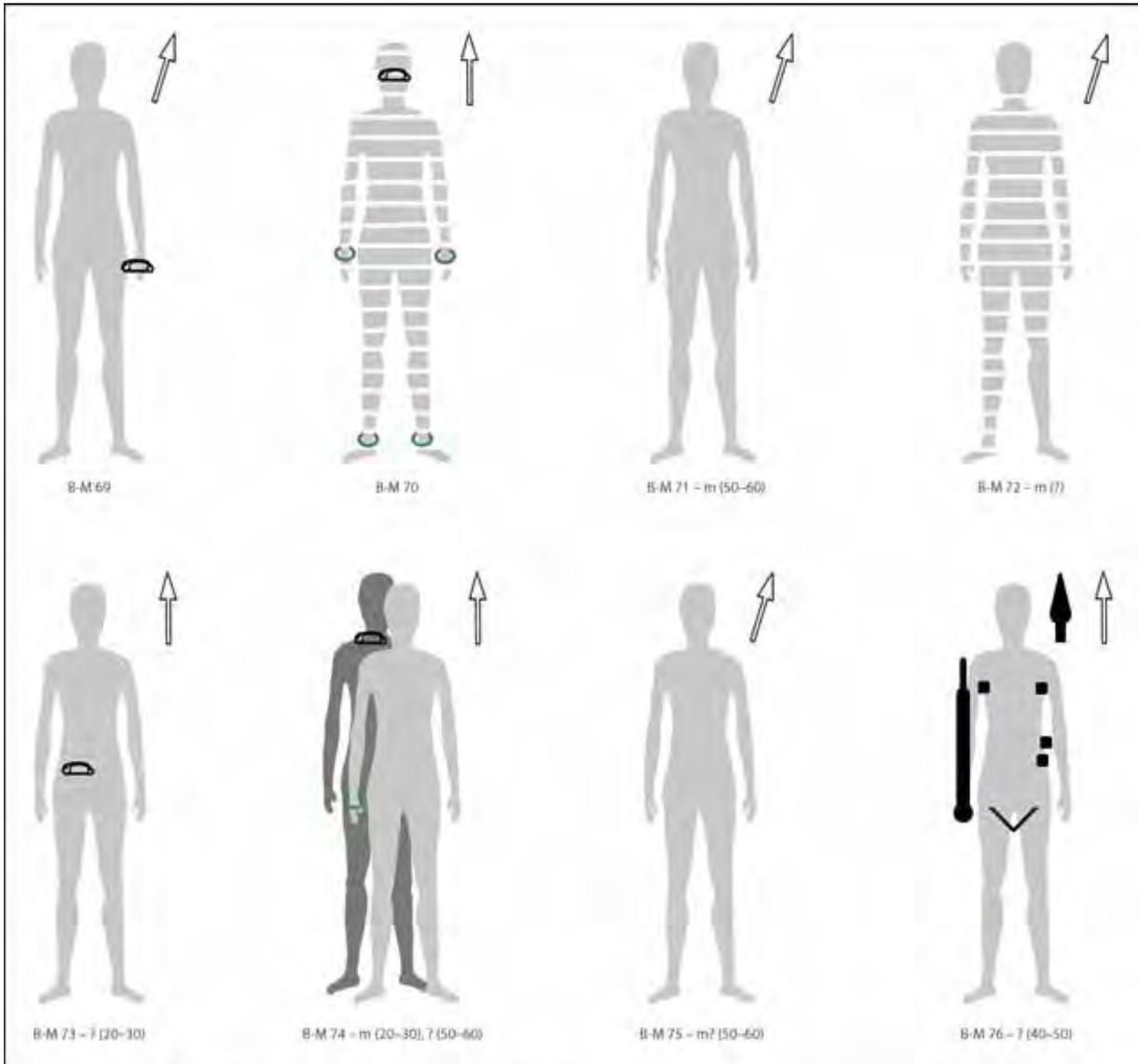


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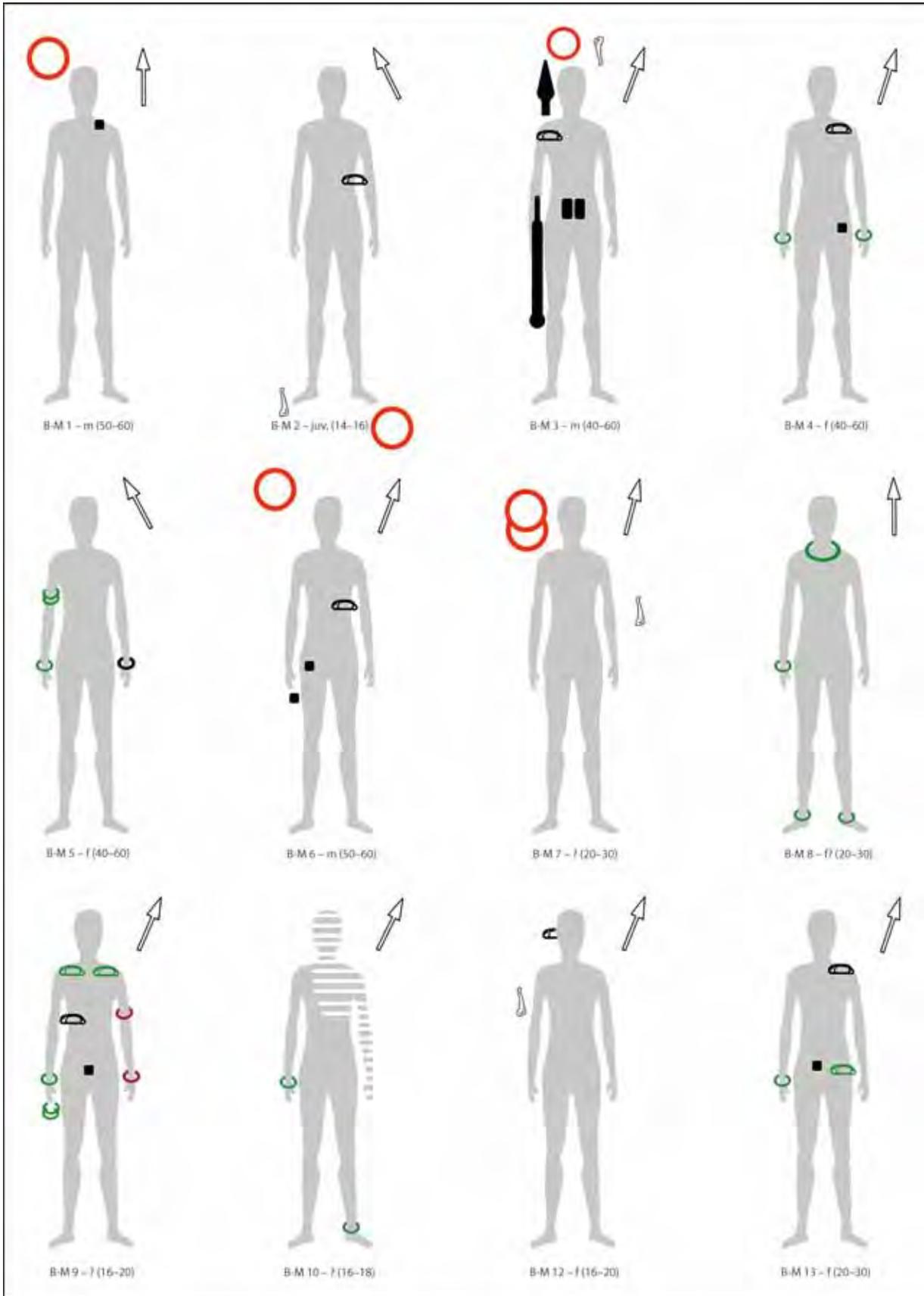


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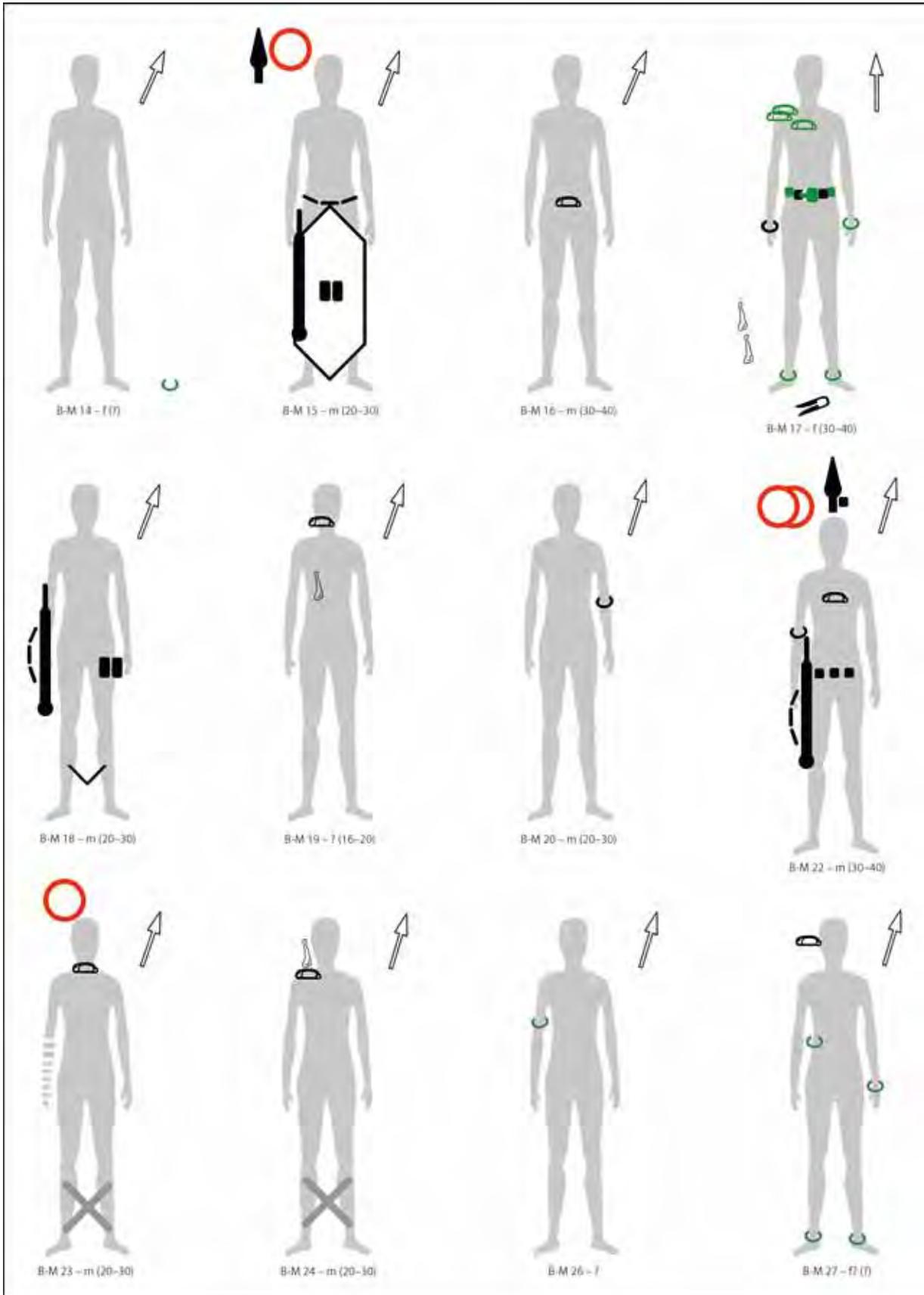


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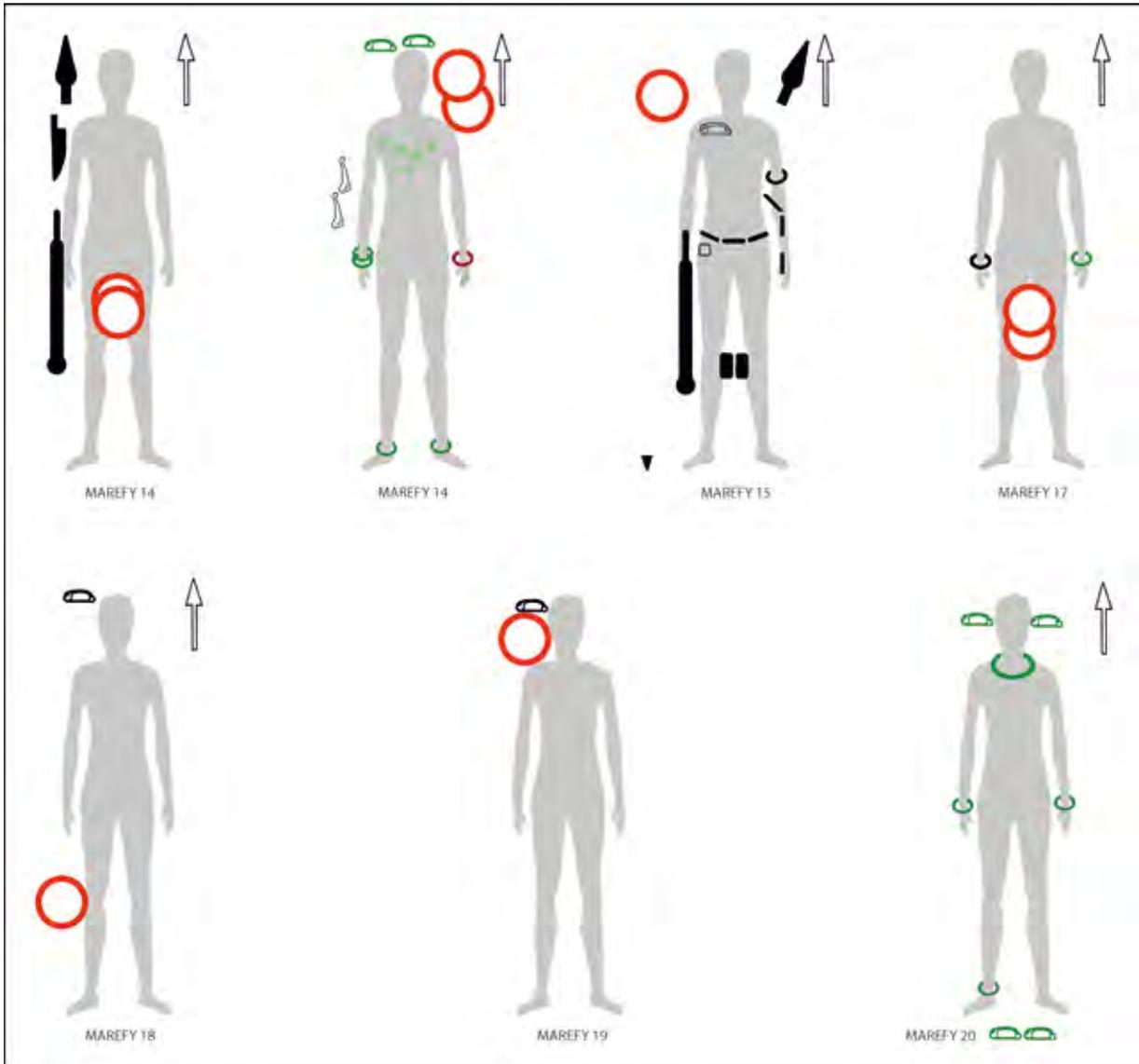


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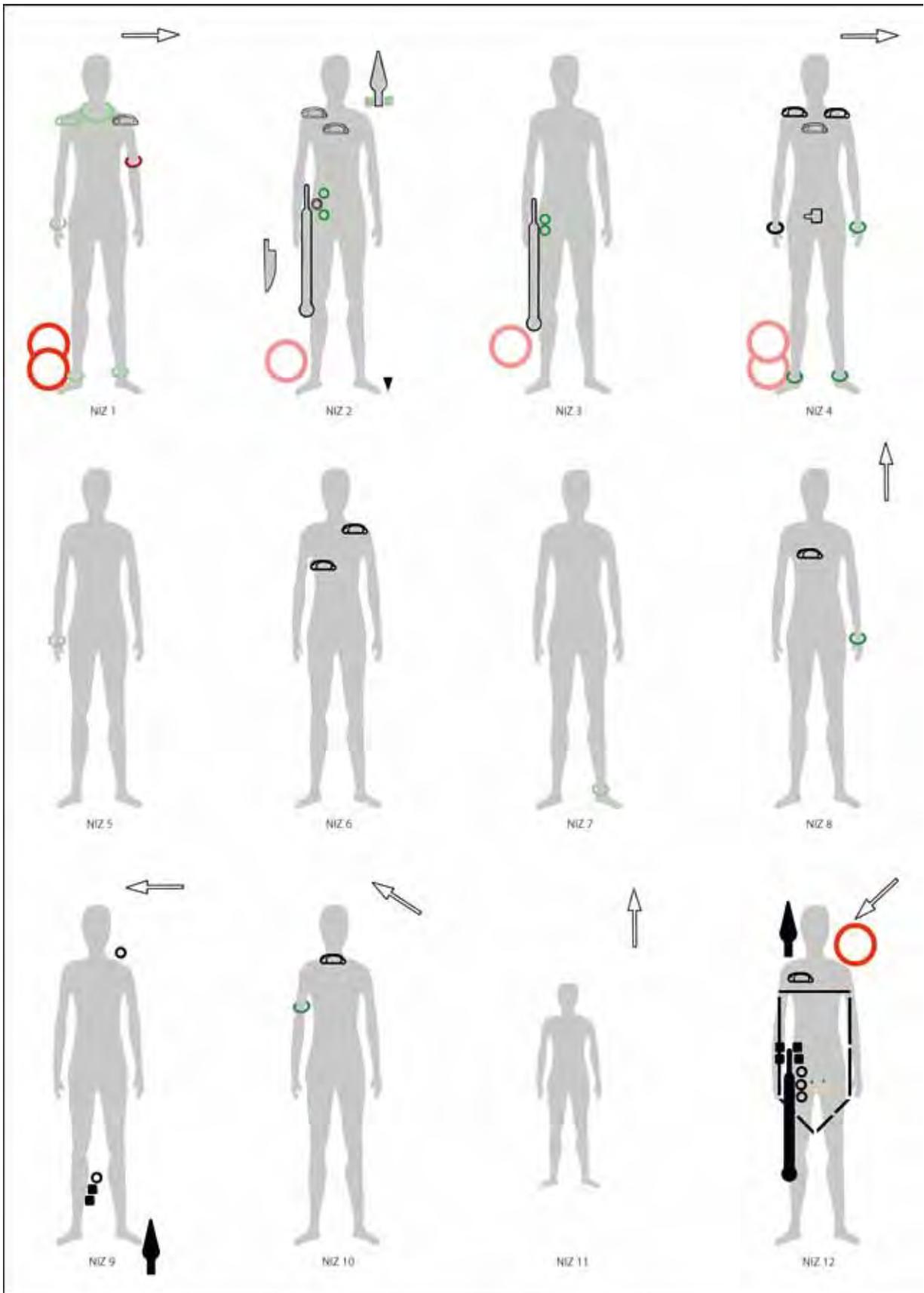


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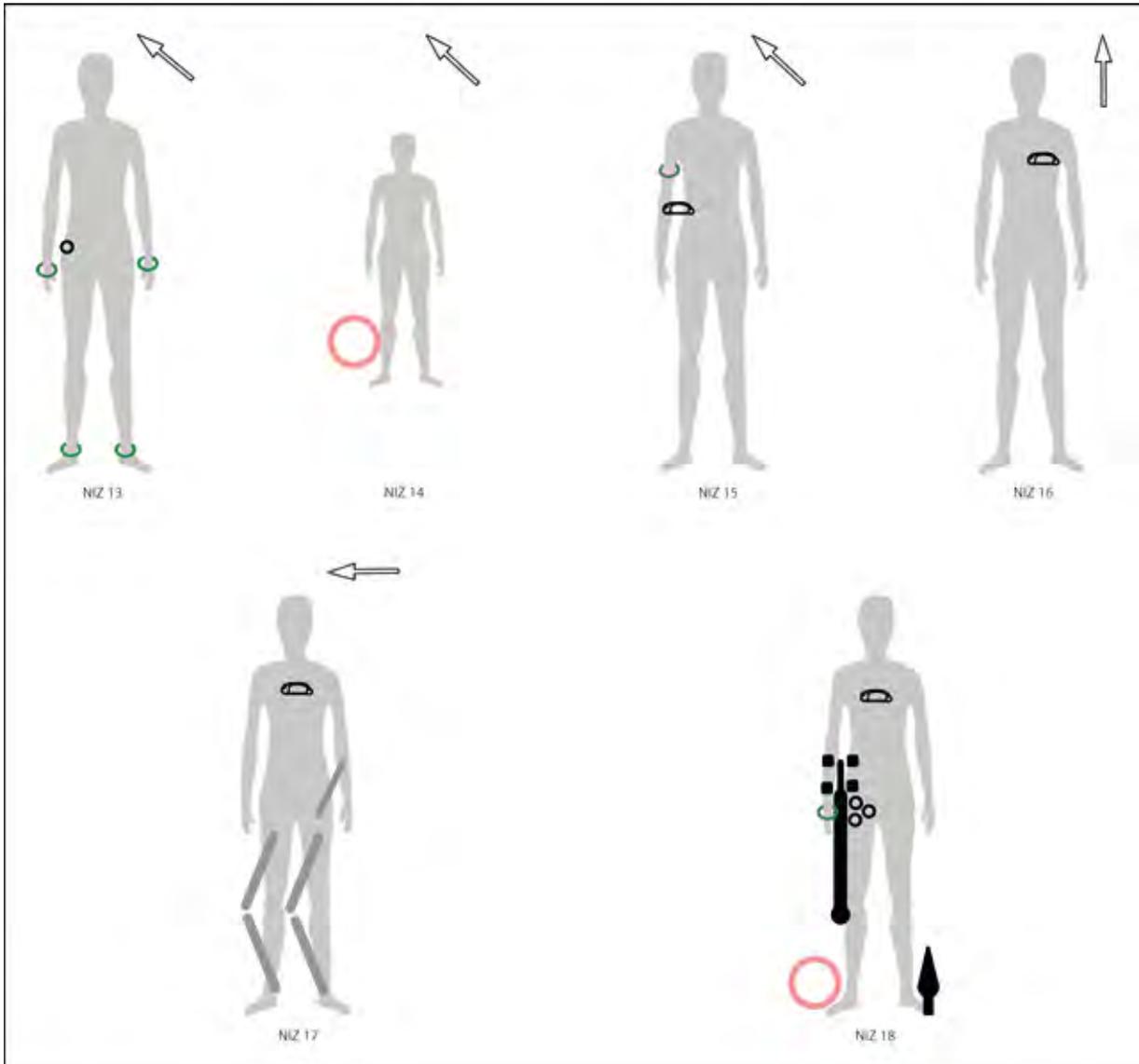


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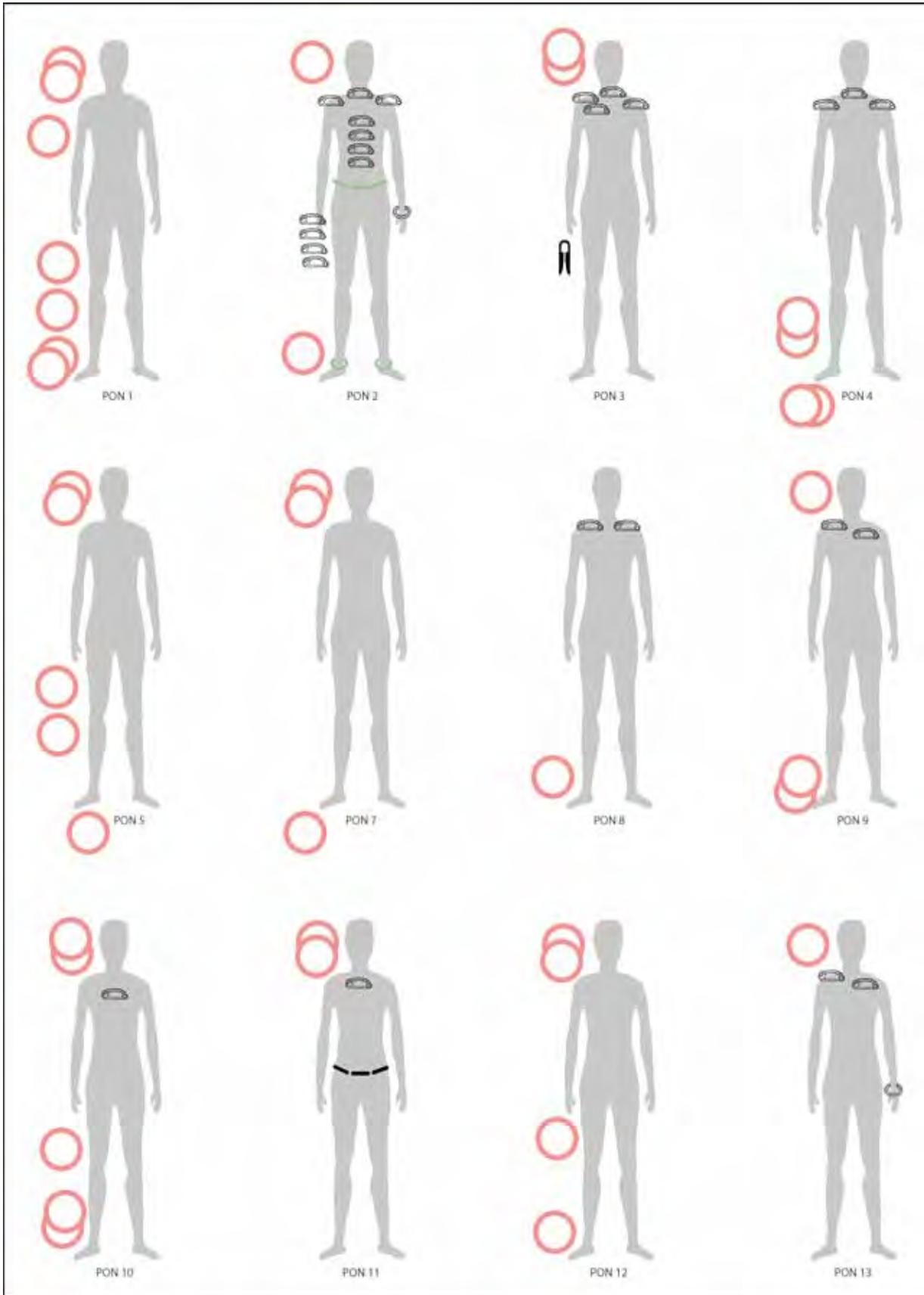


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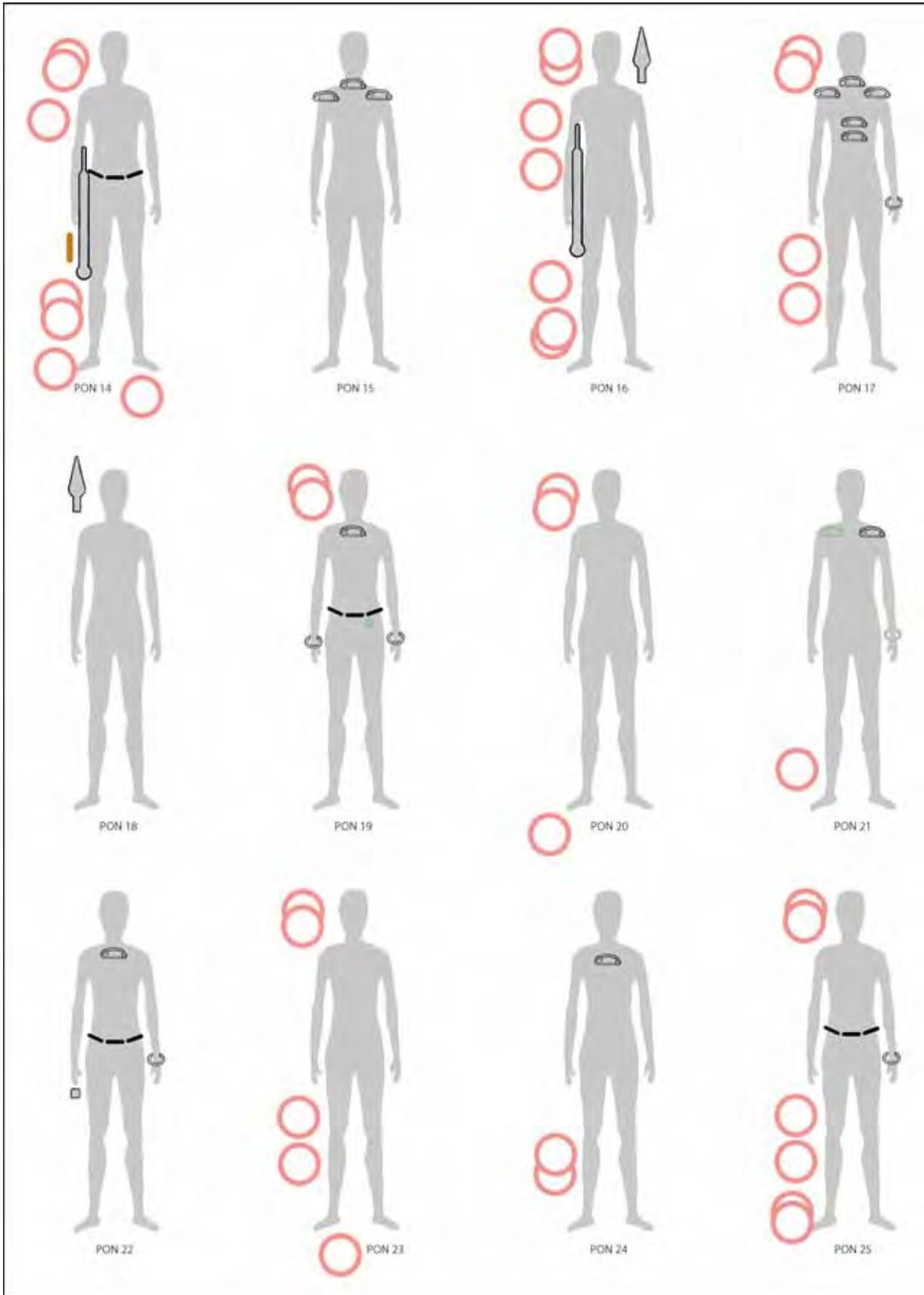


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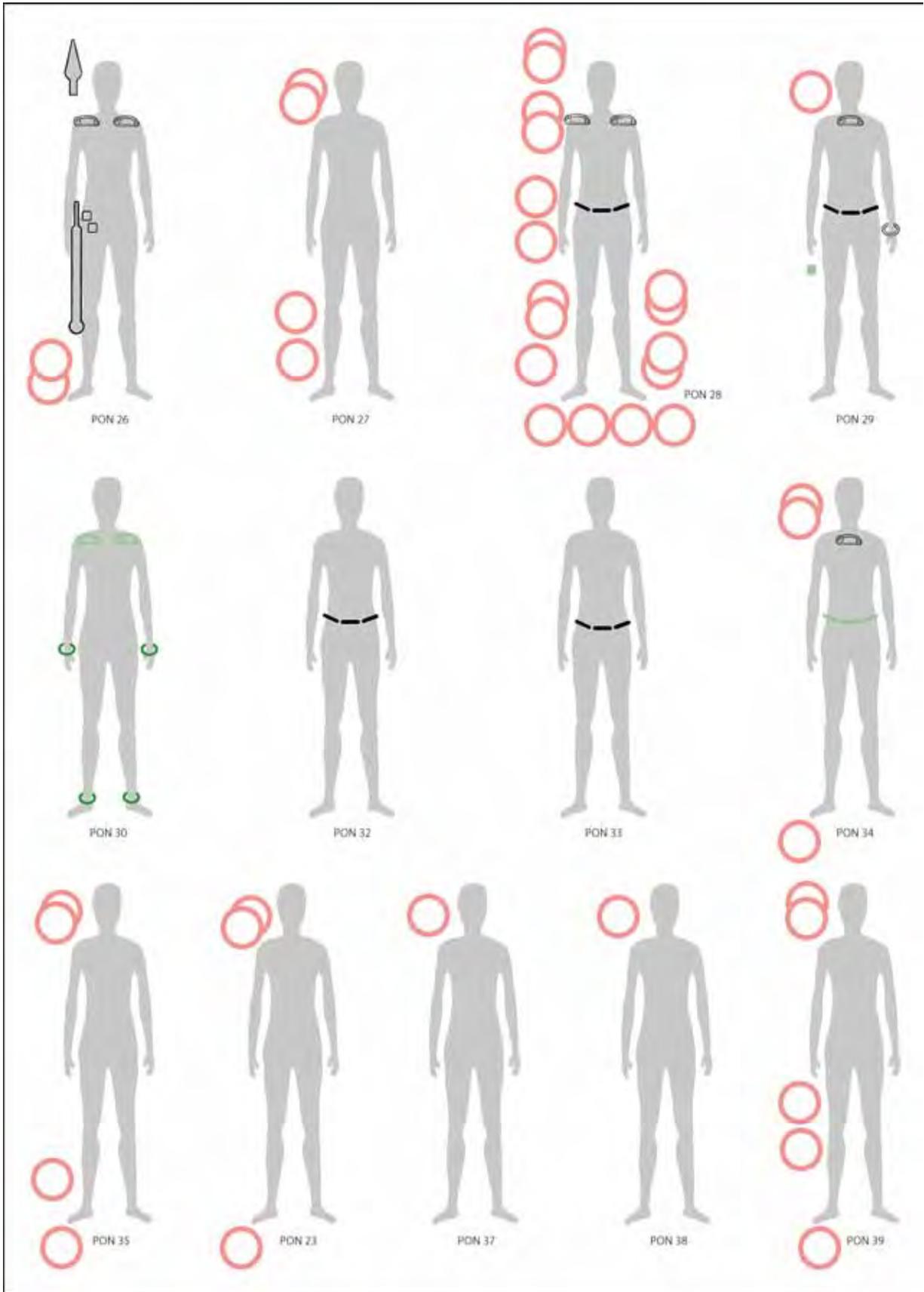


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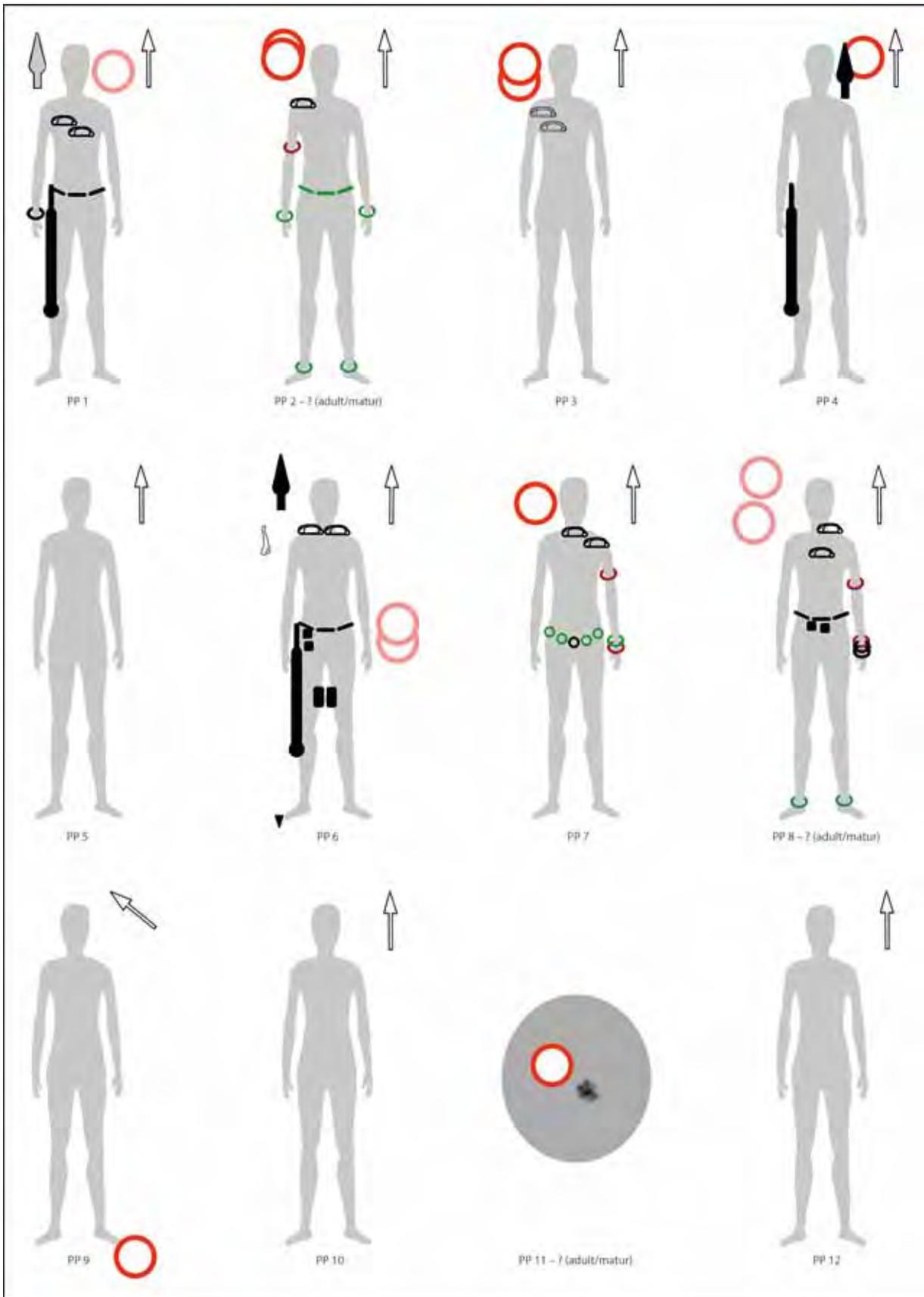


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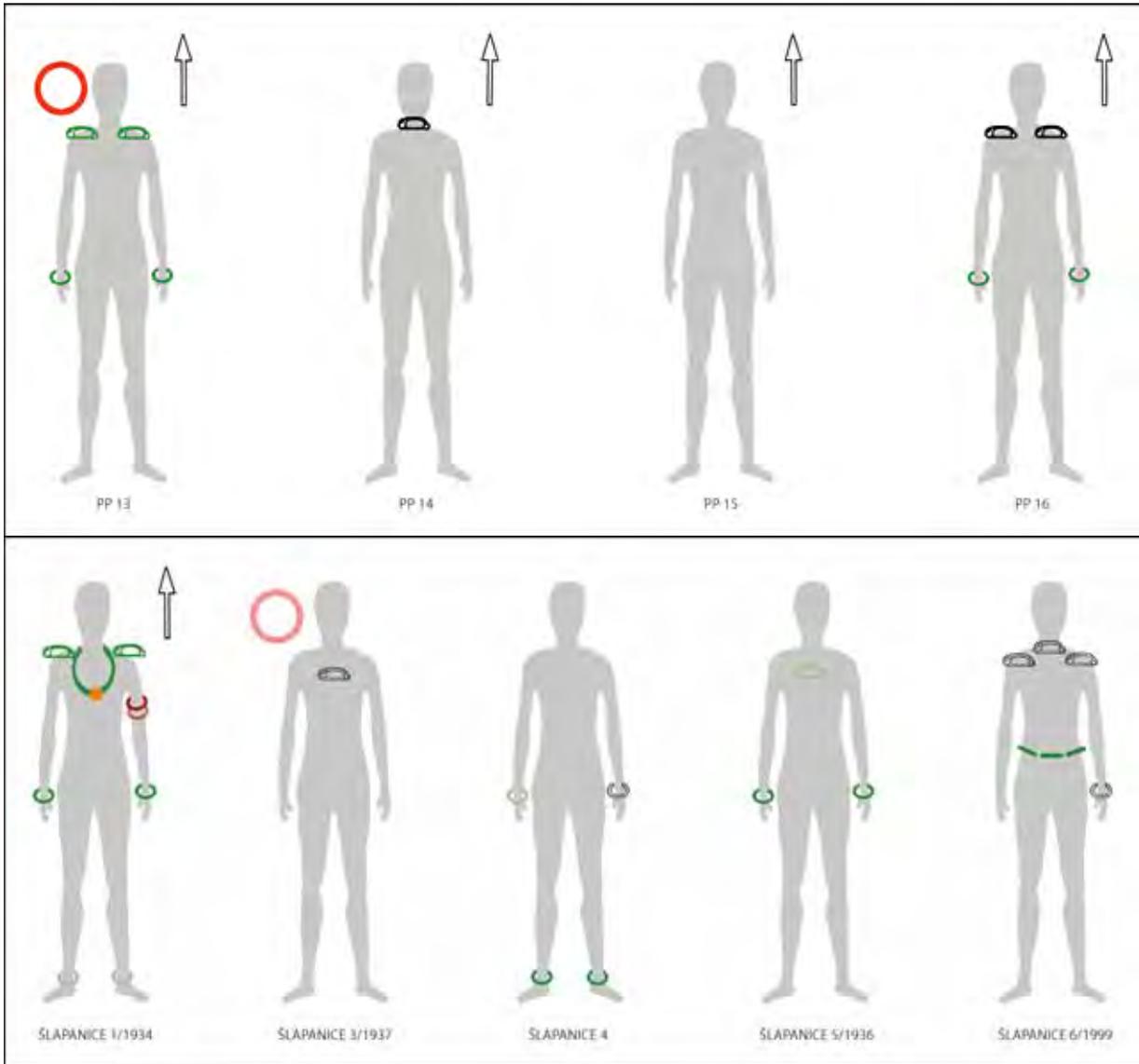


Fig. 17. Continuation.

Special cases

In Moravia, because of the research history (many cemeteries and grave groups were found in the 19th century), much of the anthropological data is missing. At that time, the skeletons were often left in the grave pits. Hence, in comparison to the other research areas, not so many special cases can be shown. The usual orientation of the burials is north to south (head in the north), as mentioned before. The cemetery of Brno-Chrlice is the big exception with primarily a south-north orientation (like in Austria).

1. East–West orientation

In Moravia, we have at least three cases with east-west orientation. The first is Brno-Maloměřice, grave 61 with a 40–50 year-old individual equipped with an iron sword in a scabbard, a lance tip with shoe, a bronze and an iron fibula next to the head, and shield rims at the feet. The second case is Nížkovice with two graves. At the first grave (9), an individual was found with rings at the left shoulder and the right leg, as well as several pendants and a lance tip at the feet. At the second grave (17) was someone with crouched legs and only one iron fibula at the breast.

2. West–East orientation

In the case of west-east orientation, we have only two cases – at the cemetery of Nížkovice. In grave 1 was an individual with a bronze necklace, bronze anklets, a bronze bracelet at the right hand and a sapolite ring at the left upper arm as well as an iron and a bronze fibula at the shoulders. Two ceramics were placed at the right side. The second is grave 4 with an individual equipped with bronze anklets, a right iron, and a left bronze bracelet, an iron belt hook, as well as three iron fibulae at the shoulder-breast area.

3. An individual with a necklace and sword

Last but not least, in grave 71 of Holubice we have the case of a weapon-equipped (sword and lance) individual wearing a necklace.

DISCUSSION AND CONCLUSION

Different classes of male identities

As a result of the study in this project, we can mention different classes of male identities. The first important class is age. This is completed by cross gender examples, which are very important in this discussion, then armed women who share a kind of male identity, and finally craftsmen.

Age classes

Age classes are important steps in everybody's life – may that be today or in prehistory. They are divided – or better connected by rites of passage (*Bourdieu 1973; van Gennep 1999*). Age was arguably one of the most important social classes in prehistory (see *Lucy 2005* etc.). This topic is divided (for our cases) into 'boy age;', 'adults' (armed and non-armed), and 'old men', who are sometimes without weapons. Importantly, the age of a (here male) person is constructed by social and cultural criteria (*Kamp 2001*).

Boys – Boys?

Different roles and markers of young males in prehistory and nowadays.

Until a certain age, sex cannot be defined. In the Iron Age, next to children without any gender markers, there are children with bracelets and/or anklets on both sides. This is to ask if individuals with these 'female markers' may be boys. As known from several historical examples, boy sometimes wear girls clothes, like Louis the 14th at the royal court in France. Also today, some boys have their first haircut when they enter school. At that age (5–6 years), also among the North American tribes, boys and girls were separated by education (*Forgey 1975, 9*).

As for archaeological evidence (Fig. 18), children's graves are sometimes rich with amulets of different materials, as we can see at Dürrnberg (*Pauli 1975*) or Mannersdorf (*Ramsel 2011*). This reflects on the one hand the high mortality of children and on the other the high status of their families, which leads to group identities. To underline these ideas, I want to give some examples from early history.

At present (looking at advertisements and shopping centers), boys are associated with the colour blue and girls with pink (*Grisard 2014*). However, if we look back to the 19th century, boys wore clothes which we now would see as those of girls – and beyond that, they were pink (*Grisard 2014, 65, Fig. 3*). Moreover, until the 1960s, e.g., in some regions in Switzerland, boys got pink ribbons and girls blue ones. This was also because blue was the colour of the Virgin Mary, so the most expensive, and a sign of purity.

Therefore, boy and girl markers change often and quickly. Our present pink-blue scheme is not older than at least 50 years.

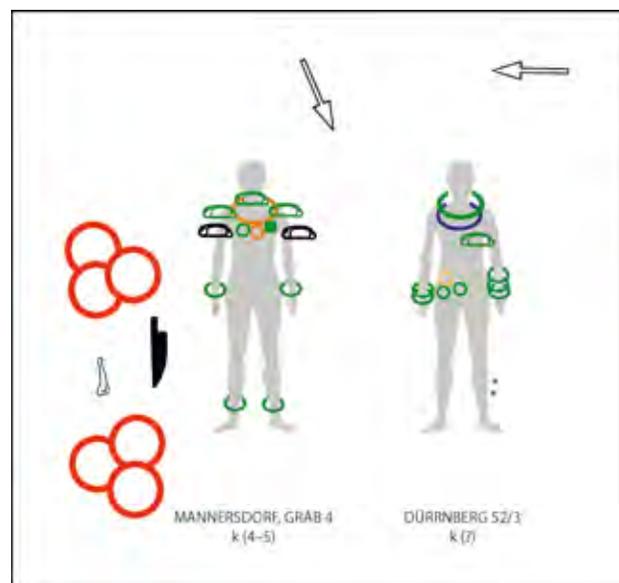


Fig. 18. Richly equipped children's grave from Dürrnberg and Mannersdorf.

Adults – armed and non(dis)armed

In principle, we can make a division between armed and non(dis)armed male individuals. The percentage of disarmed is of course(?) much higher, but there are several cemeteries in our research area where the percentage of armed persons is very high, such as in Brno-Maloměřice (Moravia) where 43% (n=30) of the (anthropologically defined) population (n=69) is male. From this group, 63% (n=19) is armed. Another example is Mannersdorf (Lower Austria) with 25 (anthropologically defined) males, where 11 are weapon-equipped, which is 44%.

Panoply groups (Fig. 19)

The groups having panoply were taken from the set of La Tène cemeteries. It is in the matter, that from different researched territories the data of different character are available.

In Austria, in La Tène A, a three-fold division amongst the warriors' equipment is applied. There are burials with from one to three spear heads (Category A), a combination of only one spear or lance head with a sword (Category B), and burials with only a sword (Category C). A wooden shield can also be assumed.

In category A (only lance and/or spear head/s) we can count FH 52 and 79; HZ 2 (*Koppelringe* – KR); INZ 268, 270 (KR), 277, 279 (KR); KUF 6, 10, 11; LPD 1, 2, 3, 6, 11; MD 299; P-C 2003/7; 2003/11 (?); OBD 1982/3, 1982/2, 1982/13, 1982/31, 2004/27, 2004/37; POT 160; WALP 166 (KR) and 172 (*Koppel-belt*). It remains under discussion if the presence of *Koppelringe* (i.e., *Koppel-belts*) is an indicator for the absence of a sword. These cases without a sword can be interpreted as special combat troops, like chariot fighters (if they have several spears) or members of a phalanx (with only one lance). We can also suppose that they used shields made of organic material.

In graves from the La Tène B, swords and lances predominate. The metal rim fittings found indicate that at least several of the graves also contained a shield. They are followed by graves with only a sword and only one spear or lance. Graves of category A are thus little represented in the phase following La Tène A; this could be due to a change of combat style during this period (i.e., between 400–250 BC).

In Slovakia in La Tène A, there is a too small a number of weapon-equipped graves to get a usable answer. In La Tène B1 and B2, the lance- and/or spearhead are placed right or left of the head or upper body. Swords can be found right of the hip and right next to the body. Shields have different positions above the body and at the space right of it.

Category A could be found with BJ 5, 36; H-BM 3; KAM 1, 3 (female?); MK 234; MN 11, 15, 32, 40 (KR), 59 (KR), 73 (KR?), 130 and finally PAL 89, SVP 62 and TNV 549.

Information available today indicates that, in Moravia, the position of the lance/spearheads is right or left of the head and in certain cases directly on the head. The sword is along the right side of the body and the shield mainly on the body itself.

Category A was found only in NIZ 9 (KR?) and PON 18, all other weapon-equipped burials had iron swords.

Archers (Fig. 20; Table 4)

In the years of this project, a new class or clearer identity was found at the cemetery of Walpersdorf in Lower Austria's Traisen valley – namely, individuals with a lot of arrowheads. They can be inter-

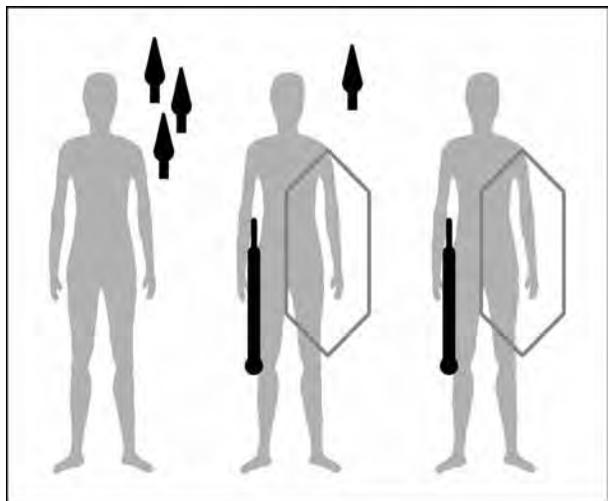


Fig. 19. Combat classes (categories A, B and C).

preted as archers. So it was in Walpersdorf grave 4, a S–N oriented individual (45–60 years), which was equipped with an iron belt hook next to iron rings and some iron arrowheads next to the left hand and a ceramic at the right foot. In grave 6, a 44–55 year-old individual with iron arrowheads and a whetstone at the left hand, some ceramic vessels at the right side and an iron knife next to the feet was buried. In Walpersdorf, grave 8, a 30–40 year-old man had 3 ceramic vessels on the left side, an iron belt hook with an extra ring, a bronze fibula on the left shoulder and many iron arrowheads at the left hand. Remarkable seems grave Walpersdorf 144 with a right-side iron bracelet and upper arm ring and a bronze fibula on the shoulder as well as 2 ceramics, an iron knife near animal bones, an iron belt hook with belt parts and iron arrowheads, this time at the right hand.

Further research showed that the cemetery of Franzhausen (Lower Austria), also had 3 of these examples. In grave 7 was buried a 51–70 year-old individual with an iron belt with hook in functional position, an iron knife next to one ceramic vessel and animal bones at the right shoulder, another ceramic at the right foot and finally iron arrowheads with bronze rivets (part of a quiver?). Grave 373 is the burial of a 25–35 year-old individual with iron and bronze arrowheads at the left upper leg. Finally is grave 1094 from Franzhausen with a 35–45 year-old individual equipped with two ceramic vessels at the left foot and one ceramic, an iron knife, and a many arrowheads of different shape made of bone next to the right shoulder.

Some of them were identified by DNA analysis (see chapter by *Gretzinger/Schiffels* in this book), but all of them were declared as male persons. Remarkable are the N–S orientation at FH 373 and the E–W at FH 1094.

Noteworthy is grave 520 from Pottenbrunn, where a full weapon-equipped man had additional arrowheads (*Ramsel 2002a*, 43–45). Another case is Au/Leithaberge, site Kleine Hutweide (grave 19): a cremation burial with an iron shield rim and 11 arrowheads as well as Kuffern, grave 1 with 3 iron arrowheads (including the famous situla).

The arrowheads mostly are made of iron, but sometimes of bronze and also of bone. The shape is most of the time flat, sometimes with extended wings, but also with 3 wings (as we know from Scythian graves). The different shapes and materials may pertain to different kinds of use, such as combat vs. the hunting of different animals like deer and birds (bone heads).

Table 4. Archers in La Tène cemeteries.

Grave	Orientation	Arrowheads	Position	Belt	Fibulae	Extra
WALP 4	S–N	iron (5)	left hand	iron	–	–
WALP 6	S–N	iron (7?)	left arm	–	iron (right)	whetstone
WALP 8	S–N	iron (8)	left hand	iron	bronze (left)	–
WALP 144	S–N	iron (8)	right hand	iron	bronze (right)	bracelet, upper arm ring (iron, right)
FH 7	S–N	iron (5)	left leg	iron	–	parts of köcher
FH 373	N–S	iron (6) bronze (2)	left hip	–	–	nothing else!
FH 1094	E–W	bones (15)	right shoulder	–	–	–
POT 520	SE–NW	iron (4)	right hand	–	2 iron (right)	panoply medical instruments
AU-KHW 19	SE–NW?	iron (11)	–	–	–	cremation shield rim
KUF 1	E–W	iron (3)	right shoulder	–	–	situla

Old men – a time without weapons

If we have a look at the data of male individuals over 50 years of age, we need mention the high percentage without weapons.

I want to start with the example of the cemetery of Pottenbrunn, Lower Austria. Here we have 45 burials with 31 anthropologically analyzed individuals: 12 male, 12 female, and 7 undefined. They consist of 2 juveniles (6/2, 570), 5 adults (3/2, 4/1, 160, 400, 562), 4 mature (2/1, 5/2, 520, 1010) and 1 senile (565).

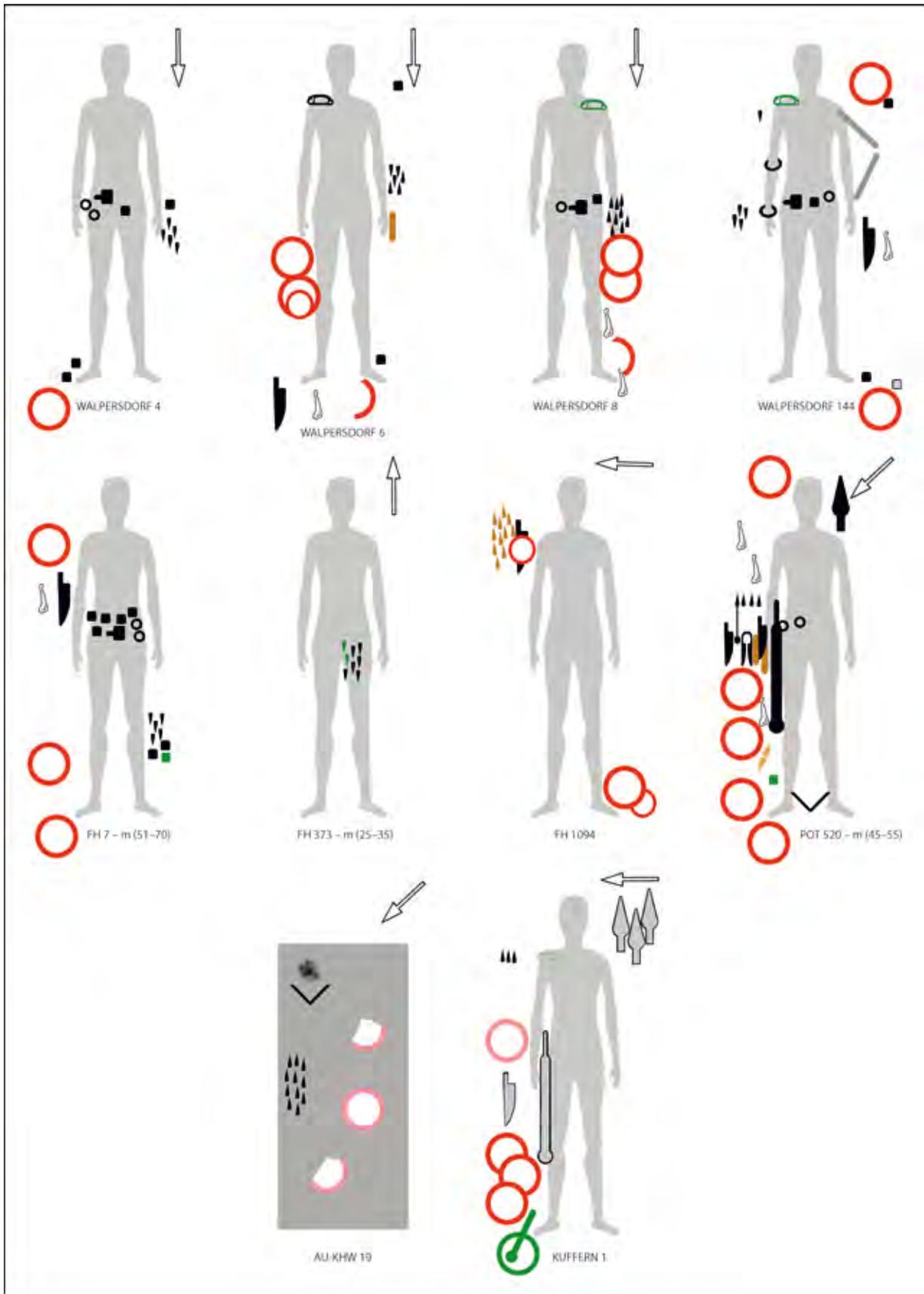


Fig. 20. Archers in La Tène cemeteries.

In opposite to the juvenile group with 4 armed individuals in grave 4, 160, 400, and 562, in the mature class (45–60 years) we can mention only one example, grave no 520. And this one case is a special one, because it is interpreted as a druid (*Ramsl 2002a*, 152). The example in senile age is equipped with a silver finger ring and a spinning whorl – a new kind of accoutrements for several ‘old’ men.

If we have a look at the cemetery of Inzersdorf (INZ), also Traisen valley, we have a similar result. Male individuals from 25 to 40 years were equipped with weapons (no. 268, 270, 277, and 279), and only one (grave 288; 51–70 years) was without weapons.

Coming to Slovakia: at the cemetery of Bajč (Table 5), from the 39 usable individuals, we have weapon-equipped grave 1 (m; adult), 5 (m; adult/mature), 9 (m; mature), 23 (m; mature), 36 (m, ?), 37 (m; adult/mature), 57 (m; mature), 58 (m; ?), 59 (m; ?), 60 (?; adult).

Table 5. Males in the cemetery of Bajč.

Bajč grave	Sex	Age	Weapons	Fibulae	Others	Special
1	m	adult	sword, lance, shield	2	upper arm rings, anklets, belt, ring, vessel	–
5	m	adult/mature	2 spears	1	bracelet, belt,	W–E
9	m	mature	–	1	bracelet, knife, whetstone	–
23	m	mature	–	2	vessel, AB	–
36	m	?	lance, shield	1	belt, AB	–
37	m	adult/mature	–	–	–	–
57	m	mature	–	–	–	–
58	m	?	–	–	bracelet vessel	–
59	m	?	–	–	3 vessels, AB, whetstone	–
60	?	adult	Sword, shield	2	–	–

Cross-gender examples

During the three years of the project, the view and approach to this topic changed fundamentally. The main bases are of course our archaeological evidence and finds. So I collected all the useable data from the early La Tène cemeteries to find ‘special cases’ where anthropologically determined biological male individuals evinced what are called ‘female markers’ in traditional archaeology (like anklets, necklaces, spinning whorls, etc.).

As mentioned in the chapters above, the following cases could be found:

1. Men with necklaces (Fig. 21; Table 6)

In Slovakia we have three cases of men with necklaces. Grave 91 in Maňa, where, next to the iron necklace and two iron bracelets at the right hand, a saddle-shaped silver fingering and a bronze one is to mention. Unusual is also the symmetric location of the fibulae costume, which is typical for female burials.

From the cemetery of Palárikovo we have grave 69A with an iron necklace, an iron upper arm ring at the left side, as well as the bronze fingering at the right hand and the silver fingering at the left hand. Next to it is grave 84 with a bronze necklace and a full weapon equipment (iron sword with a sword chain, a shield buckle and an iron lance) as well as a bronze finger ring at the left hand.

As we will see in other research areas in Austria and Moravia, male individuals with necklaces made of a different kind of metal form a special group, one which is to be discussed.

In Austria we also have 3 cases: that of grave 3 of Au/Leithaberge, site Kleine Hutweide (AU-KHW), with an iron necklace, Herzogenburg grave 3 with a bronze necklace combined with a bracelet at the right hand, and Mörbisch, grave IV. All cases are equipped with an iron sword at the right side. A new published case is this of Göttlesbrunn, Grave 5 where a male individual (22–28 years) is equipped with a necklace and a typical symmetrical bronze fibulae costume, connected with a fine

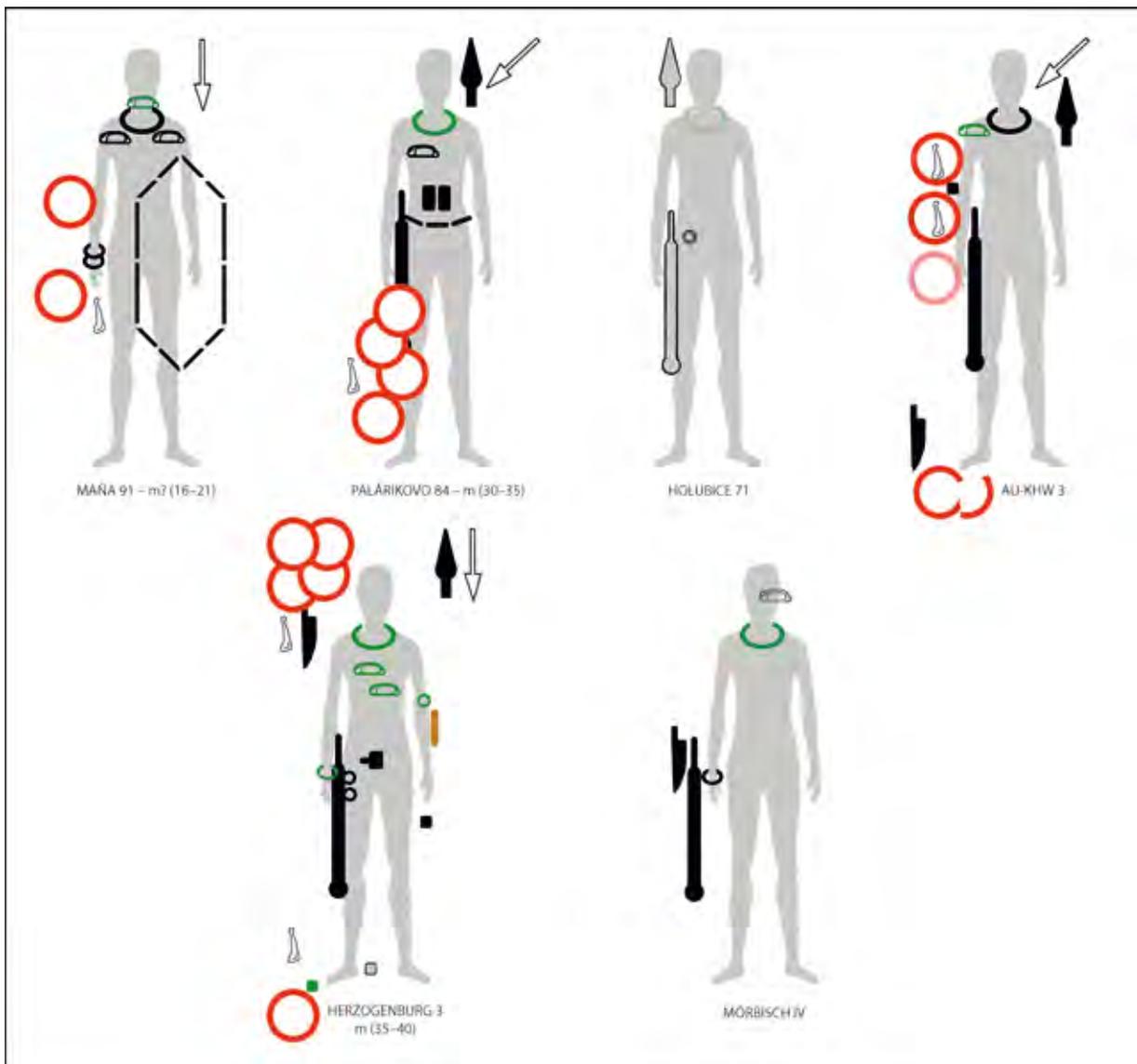


Fig. 21. Males with weapons and necklaces

chain (Karwowski/Czubak 2019). Next to it, two more fibulae, 3 ceramic vessels, and one bracelet are placed in the grave.

Finally, it is in Moravia where we find the case of a weapon-equipped individual in grave 71 of Holubice, combined with a bronze necklace.

These cases show a new group of costumes for male individuals: the combination of weapons and necklaces (6 times), necklaces and right hand bracelets (4 times), and also three times in combination with (bronze and/or silver) finger rings. The most 'female' looking individual is this of Maňa in grave 91, where, next to the iron necklace, we see a symmetrical fibula costume, a silver and a bronze finger ring, two iron bracelets at the right arm, and remains of a shield.

Table 6. Males with weapons and necklaces.

Site	Grave no.	Necklace	Weapon	Bracelet	Fingering	Fibula costume
Maňa	91	iron	shield	2 iron, right	Ag, bronze	sym
Palárikovo	69A	iron	no	iron, upperarm left	no	left
Palárikovo	84	bronze	yes	no	bronze	middle
Au/Lb	3	iron	yes	no	no	right
Göttlesbrunn	5	bronze	no	bronze, right	iron	sym with chain
Herzogenburg	3	bronze	yes	bronze, right	bronze	2 middle
Mörbisch	IV	bronze	yes	iron, right	no	head
Holubice	71	bronze	yes	no	no	no

2. Males with other ‘female markers’

When we look at grave 4 from Pottenbrunn (Lower Austria), next to the nearly unique case with the sword at the right side, we can find a double fibulae costume (with a fine chain in between; *Ramsl 2002a*, Pl. 28: 5). These fibulae combination is a typical marker which appears in the vast majority in female graves. It is also to mention that the fibulae were not found in the functional position, but at the right side of the belly, put together (*Ramsl 2002a*, Pl. 27). It is possible that these artefacts were placed (by the survivors) for a certain reason. On the one hand, it could point to the female aspect of the buried (connected also to the left hand sword), on the other hand it could be a devotional item (or final offering) from a female relative. The next example is grave 76 from Mannersdorf/Leithagebirge II (*Ramsl 2011*, Pl. 90–92), where, next to unusual kinds of ceramic and a spearpoint, a ‘double pin typ Glasinac’ or ‘omega pin’ was found. This artefact is (most of the time) a female marker from the Balkan area (*Ramsl 2009*, 123; *Vasić 1982*). Furthermore, this special burial is situated in a special area in the cemetery, where only females were buried (see *Ramsl 2011*, Fig. 181, *Gruppe 2*). This also connects this biological man to the female sphere.

Another, hitherto unnoticed case is placed in grave 160 from Mannersdorf (*Ramsl 2011*, Pl. 171; 172). It is the burial of a 35–45 year-old man. As costume and grave goods we can mention one iron fibula (no. 8) and one iron pin (no. 7) at the breast, a small knife (no. 6) with a pair of scissors (no. 5) at the right hand, close next to it a bowl (no. 4), and a small handmade bowl (no. 3). The position of a wheelturned ceramic with vertical smoothings (?) is unclear. Pins, especially iron pins, are very rare in La Tène burials in Central Europe. If they appear, they are part of female costume, so female markers. In our case, it is placed in a male’s burial.

Men with spinning whorls, as in Pottenbrunn, grave 565 (*Ramsl 2002a*, 48, 49, Pl. 67; 68) appear also in grave 162 in Novo Mesto (Kapiteljska njiva; *Križ 2005*, 63, Pl. 40: 3; last discussion in: *Dizdar/Ljuština 2019*) and Iron Age Etruria (*Weidig 2014*, 710, 711). Another case may be MK 477, where a spinning whorl appears together with a sword, belt, a pair of scissors, an iron knife with whetstone, an iron fibula, one ceramic, and animal bones (*Bujna 1995a*, Pl. 49B: 3).

3. Men with anklets (Fig. 22)

From this unconventional combination, the first case is Bajč, grave 1, where a full weapon equipped (sword, lance, belt, shield) man (adult; *Troniček 1959*), with two upper arm rings on the left, two bronze fibulae, and two anklets (*Benadik 1960*, 393–394, see original documentation). Next may be Trnovec nad Váhom, grave 549, a cremation burial with two bracelets and one anklet and a spear (*Benadik et al. 1957*, 124).

In the cemetery of Chotín we have two examples (*Görföl 2017*; *Ratimorská 1981*; *Tóth 2015*). The first case is grave 10, an individual with anklets with four big hollow buckles, a bronze chain at the shoulder area, and an iron ring (bracelet?) over the head (see *Görföl 2017*, 90), which was determined as a male via physical anthropological methods (see *Tóth 2015*, Table 1).

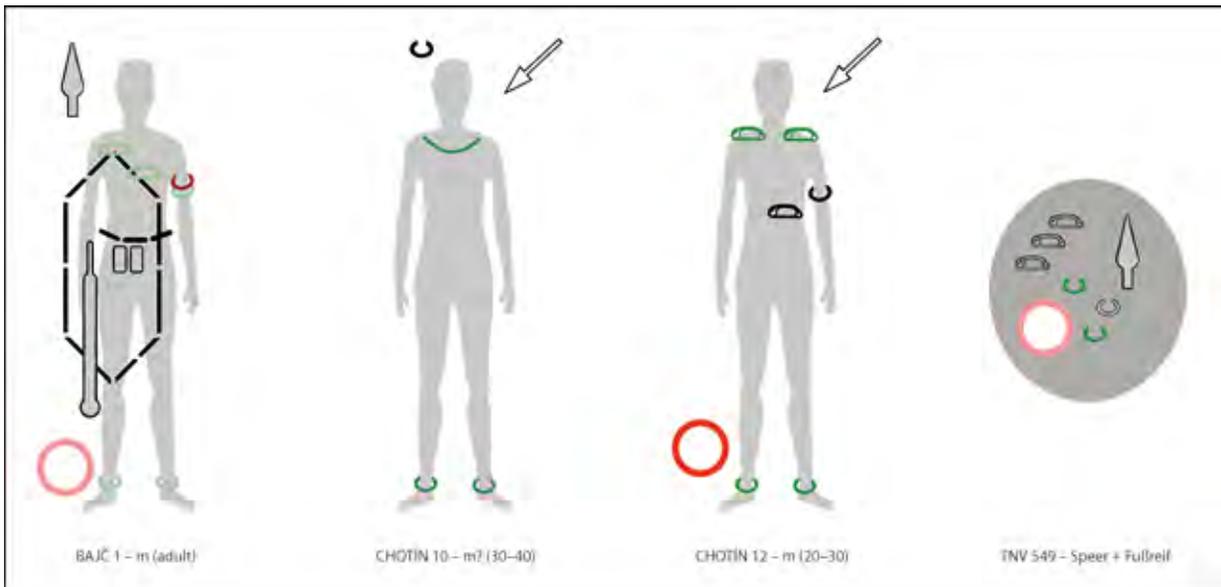


Fig. 22. Males with anklets.

The second case from grave 12 is a very special one. A man (20–30 years; *Tóth 2015*, Table 1) is equipped with a bronze fibula at each shoulder, an iron fibula at the left side of the pelvis, an iron upper arming at the left side, as well as bronze anklets with four big hollow buckles and ceramic vessel at the right side.

As written in the chapter by J. Gretzinger and St. Schiffels in this book, it is clear by analyzing the DNA that this is a biological man. As mentioned above, it is a special case, proved by two methods. Therefore, it is up to archaeology to provide an interpretation. According to my best knowledge, it is the first proven case of a male person in the early Iron Age who is wearing part of a ‘typical female costume’ – so not only some female marker, but an extraordinary one.

At first we have to take care of our ‘Western, Christian-based’ worldview in order for our work to be as objective as possible. “God created humans as male and female” is a nice Jewish/Christian slogan, but does not fit all the cases of reality. In archaeology (with the reference to ethnology) cases of high ranked male persons with ‘female’ markers have often interpreted as ‘priest-kings’ or other ‘kings and chiefs’ as well as transvestism in religious phenomena like shamanism (*Bleibtreu-Ehrenberg 1970*), who were allowed to wear female attributes, which could show the ‘religious’ meaning of these (male) persons. In our modern/recent language and view, with a lot of LGBTQ research, we would call such cases ‘transvestite’ or better ‘genderqueer’ and ‘transgender’ (NG 1, 22–26). At this juncture, I think it is important to give some definitions of these terms. Genderqueer is a term for a non-binary gender-identity, which is neither male nor female, but lying in between, beyond it, or as a combination of it (NG 1, 24–25). Transgender is a person, where gender does not fit with the gender which was assigned at birth (also transsexual).

Geschlechtsrollenwechsel zählen zwar nicht zu den häufigen, aber typischen sozialkulturellen Phänomenen; er stellt für die Analyse gentilgesellschaftlicher Systeme einen wichtigen Schlüssel dar [‘Although gender role changes are not among the common or typical social-cultural phenomena; it is an important key for the analysis of pagan systems’] (*Lipp 1986*, 530). There are ‘cultic-sacred’ and ‘social-profane’ possibilities. The first can be divided into the ‘passage-type’ and the ‘shamanistic type’. Change of gender identity can be temporary or permanent.

A very good – and often used – example is this of the *berdache* or *two-spirits* of North American natives, where men wore female clothes and adopted the roles of women – and women adopted male clothes and lived male gender roles as ‘warriors’ (e.g. *Forgey 1975*; *Fulton/Anderson 1992*). This phenomenon was observed especially in the 2nd half of the 19th century, afterwards it was stifled by Christian churches at reservations.

Armed women, fighting women (?; Fig. 23)

Women had always been part of armed struggles and war, because they touched the whole society. Nevertheless, our sources which talk of fighting women was always treat this as a kind of exception. Or was this just a reflection of the male-dominated writing of history?

We also have to think of Judith Halberstam's 'female masculinity', which "... is framed as the rejected scraps of dominant masculinity in order that male masculinity may appear to be the real thing..." (Halberstam 1998, 1).

From the beginning of (oral or written) tradition, women only in exceptional cases had the possibility to take part of combat. One of the most known cases is that of the Amazons in Greek sources, which reflect the status and role of women (underlined by burial finds) in Scythian and Sarmatian nomad societies on the Black Sea steppe area (Guliaev 2003; Mayor 2016). Also in the Iron Age we have the case of Queen Boudicca in today's England, who took the role of ruler after the death of her husband Prasutagus and led the tribes of the Iceni and Trinovanti to an albeit unsuccessful rebellion against the Romans (Ruske 2012). In the same time period, but in the sphere of legends and myth, it was the Irish Medb (English, Maeve) who was called a warrior queen, with all the corresponding qualities like polyandry, combat fighting, and ruling a kingdom (Kinsella 2002). To mention the best known example in medieval times, it is Joan of Arc, a fighting girl in the English-French war of the 15th century, who was ultimately burned alive for having violated male law (Hotchkiss 1996).

But also in the last centuries do we hear about fighting women, e.g., in the military female regiments of Dahomey, a kingdom in West Africa that existed from the 17th to the 19th century and also had female officers (Hagemann 2002).

Nevertheless, it seems only female persons of the highest class had the possibility to take such roles without fear of death.

In our research area, we also found some cases where biological female individuals had weapons as grave goods and/or were fully equipped with weapons.

The first case is Chotín, grave 30, where a 20–22 year-old woman had a full panoply, consisting of an iron sword in a scabbard, an iron weapon belt, and a spear point on the right of the head (see *Ratimorská 1981*, Pl. XIX: A). In this case, however, the DNA analysis was not successful (see chapter of *Gretzinger/Schiffels* in this book).

Also interesting is the burial in grave 37 in Oberndorf, where a 35–45 year-old woman was buried with two spear points (no. 3 and 4), parts of a belt (no. 13 and 14), a possible sword appendix (no. 15), and strange tools made of antler (*Ramsl, in prep.*, no. 11 and 12). Besides this, some ceramics (no. 5 and 6), two different kind of knives (no. 7 and 10) are also interesting. Different kind of knives combined with antler tools are also known from grave 520 in Pottenbrunn (*Ramsl 2002a*, Pl. 58–61) and from Dürrenberg-Nordgruppe, Grab 321/322 (*Zeller 2003*, Fig. 7; 10), where they have been interpreted in one case as the grave goods or tools of a 'female druid'. These examples can point to persons who are connected with medical and pharmaceutical knowledge (*Ramsl 2015*, 70, Fig. 14).

A further case is grave 117 from the cemetery of Mannersdorf II (site Reinthal), which was recently elaborated (*Ramsl 2011*, Pl. 135–141). It consists a burial of a 41–50 year-old female individual (*Ramsl 2011*, footnote 6), who was equipped with a sword with a richly decorated scabbard (no. 6) and two iron hollow rings (no. 9), which belong to the suspension of it and 2 pendants, which were part of the shield (it is believed), a lot of iron made shield rims (no. 7; *Ramsl 2011*, Pl. 136: 7), and a broad lance tip (no. 8). Next to it, an iron fibula (no. 12) at the area of the right shoulder, a wire-like bronze arming (no. 10) at the left hand as well as a band-shaped bronze finger ring (no. 11) also at the left hand. Further grave goods are a pair of scissors (no. 1), a big iron knife (no. 13) together with a whetstone (no. 14) and some animal bones (unknown), and four ceramic vessels (no. 2, 3, 4 and 5a–b). One of the ceramics (no. 2) was handmade and had a strange kind of handles, ones which are untypical for the surrounding La Tène culture. Also remarkable is the iron scabbard with open-worked decoration, which can best be compared to the example in Plessis-Gassot (grave 1002) in France (e.g., *Ginoux/Ramsl 2014*), which show the wide-ranging connections between warriors and/or craftsmen in this period (see also *Ramsl 2018a*).

The last example is from Oberndorf (excavation year 1982) graves 28/2 and 3. Here, in this grave with four burials, one juvenile person (no. 2) with bracelets on both hands and a spearpoint can be

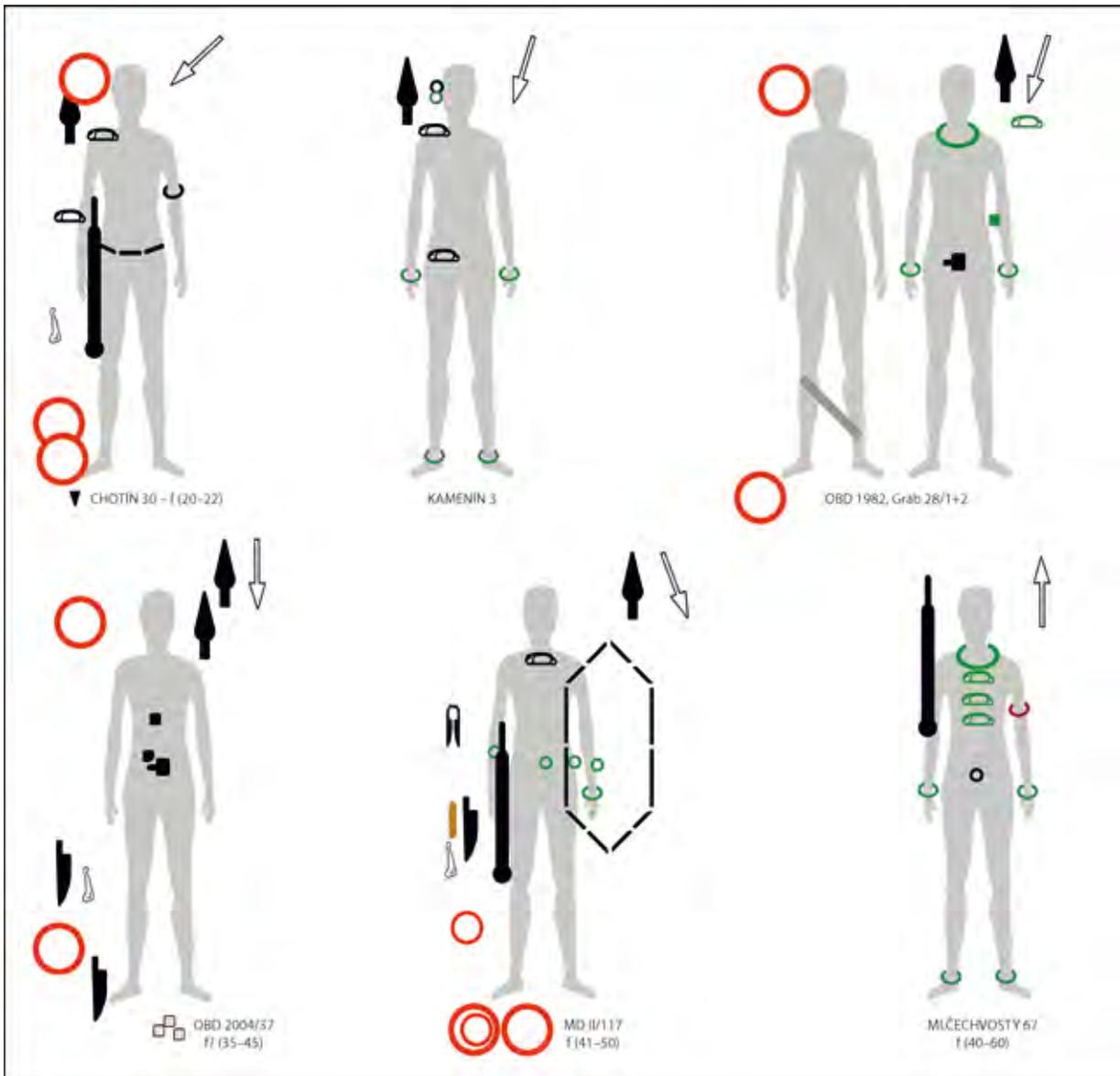


Fig. 23. Armed women in the research area.

mentioned. If we have a look at the level below, another juvenile (maybe female) person (no. 3) with a neckless and a bracelet at the right hand can be observed. The spearhead could have also belonged to this person. Both cases seems to lay out of the normal system. At first, the spearhead could belong to a woman or a man wearing two bracelets (female markers), and secondly, the spearhead belongs to a woman or as the third possibility, a man wears a necklace. These three or four possibilities all show different gender identities.

An example from Kamenín is grave 3, where an individual with bracelets on both hands and anklets on both ankles had a spear point to the right of the head (*Benadik et al. 1957, 100, 101*).

The most impressive example (sadly, outside of our research area) is that of Mlčechvosty (distr. Mělník) in Bohemia at grave 67. The individual was equipped with a typically female costume such as a necklace with stamp shaped ends, symmetric bracelets, and symmetric anklets as well as a upper arm ring (*Levínský 2009; Sankot 2014; Stránská/Hájek 2009*). Next to it – and this was the surprising thing – a sword inside a scabbard was placed next to the right arm and shoulder. The sex of the skeleton was tested by DNA analysis and it is a woman with aged 40–60. This was the first DNA proven case (in the La Tène period) of a female person with weapons.

Craftsmen identities

As a final example we shall analyze 'craftsmen' identity, i.e., individuals (male or female) who have tools as grave goods in their burials. Because of their multitude, every single example with a spinning whorl and scissor is excluded. We are interested in graves with special tools.

At first I want to mention Pottenbrunn, grave 48 (*Ramsl 2002a*, Pl. 36–38), a cremation burial (the remains are lost) with several tools like two different knives (no. 12 and 13), a clasp-knife (no. 16), a pair of scissors (no. 7), a whetstone resp. touchstone (no. 6; *Ježek 2017*), some metal instruments (no. 17; could be punts or burins), a lot of bronze scrap metal (no. 5, 8 and 9), as well as a piece of resin (no. 10) and four ceramic vessels of different shape (no. 1, 2, 3, 11).

Grave 520 at the cemetery of Pottenbrunn (*Ramsl 2002a*, Pl. 58–61) – several times interpreted as that of a 'druid' – could also be that of a craftsman. It contains (next to other things, like a full panoply and costume parts) two whetstones or touchstones (no. 13 and 14), three knives of different shape (no. 6 and 12), a pair of scissors (no. 7), a multifunctional instrument (no. 8) and a undefined instrument made of bone (no. 10). Thus, not only is the interpretation as a 'man with chirurgical and pharmaceutical skills' is possible, as was argued in a volume about craftsmanship in the Carpathian Basin (*Ramsl 2014a*). The reasons for different interpretations concern the tools, e.g., three knives of different shape (one may be a clasp-knife like in grave 48), a touch- or whetstone, one mortar stone, a pair of scissors, and finally a multifunctional iron-tool (saw, blade, and an end of unknown – hence – lost shape) and a propeller-shaped bone artefact of unknown function. All these artefacts could be used for pharmaceutical/ medicinal practice, in the same way as they could be used for working on leather (knives), textile (scissors), bones/antlers (saw), or metal (stones). This case shows that interpretation always depends on the point of view.

Next to other tools like spinning whorls in many female graves (including Oberndorf 2004/18, no. 26, 30 and 31; *Ramsl, in prep.*) there is a special case of one of these tools in grave 565 (*Ramsl 2002a*, Pl. 67: 13) with the burial of a 65–70 year-old man (*Gerold 2002*, 308), containing (next to a lot of ceramics and four fibulae) a bronze and a silver finger ring.

As mentioned above (chapter 'Armed women, fighting women' [?]), in Oberndorf 2004, in grave 37, a 35–45 year-old woman was buried amongst others with two spear points, parts of a belt (as a possible sword appendix), two different kind of knives (no. 7 and 10) and strange, undefined tools made of antler (*Ramsl, in prep.*, no. 11 and 12). The function of these kinds of tools has not been recognized yet, but is possibly in connection with butchering (to pull off the skin) or rope-making (e.g., to pull off knots in ropes).

The next example in the Traisen-valley leads us to another kind of craftsmanship – namely, to forging. The inhumation grave of St. Georgen/Traisen (mature, male, 1.75 m, orientation N–S (!!)) includes a pair of tongs, a file, and the head of a (symmetrical) hammer. The pair of scissors was found separate to the big tools (*Neugebauer 1992*, Fig. 37).

Another example is this is from Au am Leithaberge – namely, the cemetery Au, Kleine Hutweide (*Nebehay 1973*), grave 13 with two chisels, an asymmetrical hammer head, and an artefact that had possibly been used as an anvil or die (see also *Ramsl 2014a*, 72, Pl. 3: 2). Other iron artefacts (e.g., two swords with scabbards and a knife bound by an iron ring) look like a deposit of scrap material of a smith's workshop.

The final examples are from the big cemetery of Mannersdorf am Leithagebirge, site "Reinthal Süd" (*Ramsl 2011*). On the one hand, I want to have a closer look at grave 22. It includes the burial of a 19 to 25 year-old woman with lots of equipment. As in similar burials (e.g., MD 10 or 13), we can see a small deposit between right hip and the right hand (*Ramsl 2011*, Pl. 55–59). In this case, two fragments of iron bracelets, one small bronze ring and several small bronze fragments with grooves were placed in this small area. All in all, this combination of artefacts doesn't look like an extra set of bracelets, a belt or a necklace, but as a deposit showing material. Especially the bronze fragments with rims seem to be like weights or units for/of material. So here, it can cautiously be postulated that these things should show resources – so the access of this person to resources/the access of the familia to resources, etc.

Another example in Mannersdorf is grave 212 (*Ramsl 2011*, Pl. 200–205) with the burial of a 19 to 25 year-old woman. Next to a full ring costume (anklets no. 12 and bracelets no. 2 and 5), there are three kind of tools inside, so a spinning whorl (no. 2), a pair of scissors (no. 13), and an iron axe (no. 1).

The best-known 'craftman' burial in Slovakia is that of Palárikovo II, grave 2, where probably a small shovel for smithing was placed (*Paulík/Zachar 1975*, 283–340, Fig. 12; 14; see also *Bujna 1982*, Fig. 20: b). This individual ("... eher Mann als Frau... 50–60 Jahre"; see *Thurzo 1975*, 337) is equipped with symmetrical anklets (no. 12, 13) and bracelets (no. 9, 10), as well as an upper arm ring (no. 11), an iron belt (no. 7), a pair of scissors (no. 14), and a lot of fibulae and ceramic vessels (all numbers after *Bujna 1982*, Fig. 20b).

The next examples are from the cemetery of Malé Kosiky, district Nové Zámky. Here, grave no. 149 with the burial of a 30–40 year-old (probably) male individual (*Jakab 1995*, 189) is noteworthy, as it has different kinds of iron tools (*Bujna 1995a*, Pl. 17: 1–8) and a whetstone. Further, it is equipped with complete panoply (sword, shield, and lance) as well as fibulae and ceramics (*Bujna 1995a*, 37–41). Also in grave 176, which consists of the cremation burial of a 30–50 year-old individual (*Jakab 1995*, 190) we have to mention some iron tools (no. 6–8). Next to a sword and two lance tips, we have again fibulae and ceramics (*Bujna 1995a*, Pl. 19–20). And finally, it is grave 453 (prob. male, 40–60 years – *Jakab 1995*, 202), which includes next to strange iron tools and a tweezers (no. 17–20) two knives of different shape (no. 15, 16).

Conclusion

Apart from different identities in the biological male populations, in this project 'special cases' have been selected from the enormous corpus of La Tène period cemeteries of Moravia, western Slovakia, and eastern Austria. On the one hand, the selection criteria have been the grave goods, which are divided (traditionally) into 'male markers' (weapons, heavy tools, etc.) and 'female markers' (symmetrical bracelets and anklet ring costumes, necklaces, and special tools like spinning whorls). On the other hand, these markers of the single burials have been compared with the biological sex, which has been analyzed by physical anthropologists (bio-archaeologists). Also, mixed (so, female and male) markers in one grave have been observed and analyzed. As far as the data was of good quality, only a low percentage of these burials are 'special cases' – as far as we can see them in our restricted sources.

This was the first time such a study of gender identities in this dimension has been attempted in Central Europe based on archaeological and anthropological data. Moreover, it seems that the fluidity of individual identities in different social contexts was possible in these ancient societies and I am quite sure that we have managed to observe only a small part of it. There is also the question of how we should imagine such people in the Iron Age – men with female markers/costumes and women with male markers. We have seen only too many romanticizing and idealizing pictures of a fighting Boudicca or Maeve, but no 'Celtic' men in women's dress. Maybe the 'Fighting Celtic Warrior' is a good example of male-dominated history writing (or simply of a strong *topos*).

At this point I have to mention that we have to take care not to impose the situation and development in our recent societies on the data of ancient societies. The relevance of the identity constructions of these detected cases may be seen as one single brick in the construction of the selected Iron Age societies. This study is but one simple step toward exploring the fluidity of individual gender identities in different social contexts.

DIVERSITY OF MALE IDENTITIES IN EARLY AND MIDDLE LA TÈNE PERIOD CEMETERIES IN CENTRAL EUROPE

Summary

Discourse on male identities in the Iron Age has been dominated by thoughts about warrior identity. Only a fraction of male bodies found in graves, however, are staged as warriors. This project has explored alternative male identities. A big advance is the enormous corpus of La Tène period graves and cemeteries in the working area of Slovakia, east Austria, and Moravia. Here we can apply the methods of gender archaeology, which has come to exert a very important impact on scientific research. In the first year of the project we sampled the data from the early (and partly, the middle) La Tène period cemeteries at the archives of the Institute of Archaeology of the Slovak Academy of Science (IA SAS) in Nitra. Here the plans and data of the cemeteries of Dvory nad Žitavou, Holiare, Trnovec nad Váhom – Horný Jatov, Hurbanovo-Abadomb, Hurbanovo-Bacherov majer, Bučany, Dubník, and Maňa could be examined. The plans and data of the unpublished elaboration of the cemetery in Palárikovo were also possible to access. Institutions in Austria lent additional crucial assistance – namely, the Naturhistorisches Museum, University of Vienna, Institute for Prehistory and Historical Archaeology, and above all the *Bundesdenkmalamt* and the Museum Mannersdorf/Leithagebirge, from which I made avail of data and plans of the published elaborations of cemeteries (Pottenbrunn, Mannersdorf, Au am Leithaberge, Getzersdorf etc.) and also unpublished ones (Oberndorf in der Ebene, Ossarn, Franzhausen, Walpersdorf, Rassing, Göttlesbrunn etc.). In the 2nd year, the sampling of data continued at these institutions and was completed mainly at the Moravské Zemské Muzeum in Brno (CZ), which means cemeteries like Brno-Maloměřice, Brno-Chrlice, Holubice, Křenovice, and Blučina etc. In 2017 still unpublished material of the districts of Hodonín, Kroměříž, Olomouc, Opava, Prostějov, Přerov, Uherské Hradiště, and Zlín were sampled. In 2018, the main focus was the control of the collected data sets and their processing and analysis. An important stage of our work came when we successfully held the planned workshop “Multiple femininities – multiple masculinities: the diversity of gendered identities in the Bronze and Iron Ages” (organized together with Katharina Rebay-Salisbury of OREA of the Austrian Academy of Sciences, ERC project “The value of mothers to society”) at Klement-Oberleis (29–30, September 2016). 25 members from seven countries reviewed gendered social roles, their conceptualizations, and how they are attributed to later prehistoric people. In 2018, another workshop was organized (this time in Nitra) on the topic “Diversity of Identities in Prehistory, Early history, and the Present” (29–30 October, 2018). Over those two days about 60 colleagues from 8 countries joined the workshop.

In all three years, several cases of the research topic were found: for instance, at the cemetery in Oberndorf/Ebene a special case was disclosed with grave 102 (1982), where a 40–55 year-old old woman was buried with a weapon-belt, this being a male marker. Also at grave 9 (1982) it is not clear that in the burial with an iron sword it was a male or a female individual who was buried. Moreover, some male individuals without or with but poor grave goods were selected. At the cemeteries of Walpersdorf and Franzhausen special kinds of identities of persons were found, such as archers. These will be explained as hunters or special combat groups of the local ‘warriors’. At Inzersdorf, a partial analyses showed that there is a big distinction between young, armed, and well-equipped men and only a few old, non-armed and ‘poor’ ones (e.g., no. 288). In Palárikovo, two individuals (m, 16–20 y.) and (m, 35 y.) wore necklaces, which is entirely unusual for our research areas, because normally these are female markers. Also at the cemetery of Chotín there can be seen other special cases of burials (m, 30–40 years and m, 20–30 years), where these male persons wore anklets, which are altogether typical female markers. One of these cases (Chotín, grave 12) has been proved by DNA analysis and confirmed. Expected results can be seen in the full analysis of the early (partly middle) La Tène cemeteries in east Austria, south-west Slovakia and south Moravia. We can see which roles men without weapons played in these societies. The status of disarmed men with finger rings made of precious metals is that of *old*, *wise*, or *experienced* men. Different life-stage identities have been

analyzed and special *boy identity* and *old man identity* as well as *poor man identity* have been extracted. Special identities with unclear affiliation (*male with 'female' ring costumes, female with weapons etc.*), *druid identities, craftsmen identities* and *special combat groups* (such as archers) have been identified. Next to explanations via gender and identity theory, it was possible to verify and falsify some cases by DNA analysis.

During the third and final year it was possible to make anthropological analyses of skeletons from cemeteries in Austria elaborated (but yet unpublished) by Friederike Novotny. This focused on a selected sample of 12 individuals from the cemeteries Walpersdorf and Franzhausen Mitte located in the Traisen valley. Although only a few individuals were observed, the selected sample of individuals reveal remarkable cases of (chronic) diseases, artificial dental attritions, particular activity patterns, and perimortem traumatic injuries. In particular are the double-burials: grave FH 590 with an adult woman and her unborn child with evidence of perimortem traumatic injuries, and grave FH 814 with two children buried with special fibulae in the associated grave goods and with severe pathological conditions and perimortem traumatic injuries and/or incisions on the postcranial skeleton.

Genetic analyses of archaeological skeletal human remains have become routine thanks to state-of-the-art sequencing methodology. Joscha Gretzinger and Stephan Schiffels (MPI Jena) obtained genetic data from 8 of the 9 analyzed individuals from three archaeological sites in Slovakia (Palárikovo, Chotín, and Dubník). These analyses allowed us to confidently determine the genetic sex of the 8 successful samples, as well as preliminary ancestry information for two of the analyzed samples. DNA preservation in the three analyzed sites was remarkably good. We could successfully retrieve human DNA, reaching up to 60% in PAL001, from all but one individual.

In summary, the role of male individuals was much more diverse than has hitherto been discerned. Men were not only weapon-equipped 'warriors', but also belonged to other disarmed classes, ones which demonstrate different characteristics. It needs to be mentioned that age classes played the most important role. Moreover, we saw male individuals with female markers as well as females with male markers – who thereby had partially male identities, as well as the other way round.

VIELFALT VON MÄNNLICHEN IDENTITÄTEN AUF FRÜH- UND MITTELLATÈNEZEITLICHEN GRÄBERFELDERN IN ZENTRALEUROPA

Zusammenfassung

Der Diskurs über männliche Identität in der Eisenzeit wurde bisher von Gedanken über „Kriegeridentität“ geprägt. Dabei wurde nur ein geringer Teil der gefundenen Toten bewaffnet ins Grab gelegt. In diesem Projekt sollten alternative männliche Identitäten dazu erforscht werden. Großer Vorteil waren dabei die enorme Anzahl von latènezeitlichen Gräbern bzw. Friedhöfen in unserem Forschungsareal der Slowakei, Ostösterreich und Mähren. Dabei sind die Methoden der Gender-Archäologie zu nennen, die bereits einen großen Einfluss auf die Forschung haben. Im ersten Jahr des Projekts wurde eine Zusammenfassung von Daten von Gräberfeldern aus der Frühlatènezeit im Archiv des Archäologischen Instituts der SAW in Nitra erstellt. Hier konnten die Pläne und Daten der Friedhöfe von Dvory nad Žitavou, Holiare, Horný Jatov – Trnovec nad Váhom, Hurbanovo-Abadomb und Hurbanovo-Bacherov Majer, Bučany, Dubník und Maňa gesammelt werden. Auch die Pläne und Daten des unveröffentlichten Friedhofs von Palárikovo waren verfügbar. Auch an Institutionen in Österreich, so am Naturhistorischen Museum, der Universität Wien, Inst. für Urgeschichte und Hist. Archäologie und vor allem am Bundesdenkmalamt und am Museum Mannersdorf/Leithagebirge wurden Daten und Pläne der veröffentlichten Friedhöfe (Pottenbrunn, Mannersdorf, Au am Leithaberge, Getzersdorf usw.) sowie der unveröffentlichten (Oberndorf/Ebene, Ossarn, Franzhausen, Walpersdorf, Rassing, Göttlesbrunn usw.) gesammelt. Im zweiten Jahr wurde die Datenerhebung an den genannten Instituten fortgesetzt und hauptsächlich am Moravske Zémske Muzeum in Brno weitergeführt und Gräberfelder wie Brno-Maloměřice, Brno-Chrlice, Holubice, Křenovice oder Blučina etc. miteinbezogen. Im Jahr 2017 wurden die (damals) noch unveröffentlichten Materialien der Bezirke Hodonín, Kroměříž, Olomouc, Opava, Prostějov, Přerov, Uherské Hradiště und Zlín aufgenommen. Im Jahr 2018 lag der Schwerpunkt auf der Kontrolle der gesammelten Datensätze sowie deren Aufbereitung und Auswertung.

Ein wichtiger Punkt war die erfolgreiche Organisation des Workshops „Multiple femininities – multiple masculinities: Die Vielfalt geschlechtlicher Identitäten in der Bronze- und Eisenzeit“ (zusammen mit Katharina Rebay-Salisbury von OREA der Österr. Akademie der Wissenschaften, ERC-Projekt „The value of mothers to society“) in Klement-Oberleis (29.–30. September 2016). 25 Teilnehmer aus sieben Ländern haben geschlechtsspezifische soziale Rollen, ihre Konzeptualisierungen und ihre Zuordnung zum prähistorischen Mensch diskutiert. 2018 wurde erneut ein Workshop (diesmal in Nitra) zum Thema „Diversity of Identities in Prehistory, Early history, and the Present“ (29.–30. Oktober 2018) organisiert. An den beiden Tagen zusammen nahmen rund 60 Kollegen aus 8 Ländern am Workshop teil. In allen drei Jahren wurden mehrere Fälle des genannten Forschungsthemas gefunden: Im Gräberfeld in Oberndorf/Ebene, kann z.B. ein Sonderfall mit Grab 102 (1982) erwähnt werden, in dem eine 40–55-jährige Frau mit einem Waffengürtel, also einem männlichen Kennzeichen, begraben wurde. Auch bei Grab 9 (1982) ist nicht klar, ob bei einer Bestattung mit einem Eisenschwert ein männliches oder ein weibliches Individuum begraben wurde. Auch einige männliche Individuen ohne oder nur mit minderwertigen Grabbeigaben konnten herausgestellt werden. Auf den Friedhöfen von Walpersdorf und Franzhausen sind besondere Arten von persönlichen Identitäten gefunden worden, in diesem Fall Bogenschützen. Dies kann als Jäger oder spezielle Kampfgruppen der lokalen „Krieger“ erklärt werden. In Inzersdorf ergab eine Teilanalyse, dass es einen großen Widerspruch zwischen jungen, bewaffneten und gut ausgestatteten Männern und nur wenigen alten, nicht bewaffneten und „armen“ Männern gibt (z.B. Nr. 288). In Palárikovo tragen zwei Individuen (m, 16–20 Jahre) und (m, 35 Jahre) Halsreife, was für unsere Forschungsareale absolut ungewöhnlich ist, da es sich normalerweise um weibliche Kennzeichen handelt. Auch auf dem Friedhof von Chotín gibt es andere Sonderfälle, von Grab 12 (m, 30–40 Jahre) und 30 (m, 20–30 Jahre), wo diese männlichen Personen Fußreife angelegt bekamen, die (mehr) als typische weibliche Kennzeichen sind. Einer dieser Fälle (Chotín, Grab 12) wurde durch DNS-Analyse überprüft und bestätigt. In allen drei Jahren sind mehrere Fälle des genannten Forschungsthemas in der Analyse der frühlatènezeitlichen Gräberfelder in Ostösterreich, SW-Slowakei und Südmähren zu erkennen. Wir können sehen, welche Rollen Männer ohne

Waffen in diesen Gesellschaften spielten. Der Status von unbewaffneten Männern mit Fingerringen aus Edelmetallen war vom Alter her der von „weisen bzw. erfahrenen“ Männern. Verschiedene Identitäten im Lebensstadien wurden analysiert und spezielle Identitäten von jungen und alten Männern sowie die Identität armer Männer extrahiert. Spezielle Identitäten mit unklarer Zugehörigkeit (Männer mit «weiblichen» Ringkostümen, Frauen mit Waffen usw.), Druiden- und Handwerkeridentitäten sowie spezielle Kampfgruppen (als Bogenschützen) konnten identifiziert werden. Neben geschlechts- und identitätstheoretischen Erklärungen konnten einige Fälle durch DNS-Analyse verifiziert bzw. falsifiziert werden.

2018 war es möglich, anthropologische Analysen von Skeletten noch unveröffentlichter Friedhöfe in Österreich durch Friederike Novotny (Wien) zu machen. Im Mittelpunkt stand eine ausgewählte Stichprobe von 12 Personen aus den Friedhöfen Walpersdorf und Franzhausen Mitte im Traisental. Obwohl aus nur wenige Individuen bestehend, zeigt die Stichprobe bemerkenswerte Fälle von (chronischen) Krankheiten, künstlichen Zahnabrieb, bestimmten Aktivitätsmustern und perimortalen traumatischen Verletzungen. Insbesondere die beiden Doppelbestattungen – Grab Franzhausen 590 mit einer erwachsenen Frau und ihrem ungeborenen Kind mit Hinweisen auf perimortale traumatische Verletzungen und Grab Franzhausen 814 mit zwei Kindern, die mit speziellen Fibeln und mit schweren pathologischen Zuständen und perimortalen traumatischen Verletzungen begraben wurden sowie Schnitte am postkranialen Skelett aufweisen – sind außergewöhnlich.

Genetische Analysen von archäologischen Überresten menschlicher Skelette sind Dank der Sequenzierungsmethode der nächsten Generation zur Routine geworden. Joscha Gretzinger und Stephan Schiffels (MPI Jena) erlangten genetische Daten von 8 von 9 untersuchten Personen aus drei Friedhöfen in der Slowakei (Palárikovo, Chotín und Dubník). Diese Analysen ermöglichten es, das genetische Geschlecht der 8 erfolgreichen Proben sowie vorläufige Abstammungsinformationen für zwei der analysierten Proben sicher zu ermitteln. Die DNA-Konservierung an den drei analysierten Stellen war bemerkenswert gut. Sie konnten menschliche DNA, die in PAL001 bis zu 60% erreicht, von allen bis auf eine Person erfolgreich abrufen. Zusammenfassend lässt sich sagen, dass die Rollen männlicher Individuen weitaus vielfältiger waren als bisher gesehen. Männer gehörten nicht nur zu mit Waffen ausgerüsteten „Kriegern“, sondern auch zu anderen unbewaffneten Klassen, die unterschiedliche Charakteristiken aufwiesen. Es ist zu erwähnen, dass Altersklassen die wichtigste Rolle spielten. Wir haben sowohl männliche Individuen mit weiblichen als auch weibliche mit männlichen Kennzeichen gesehen – also besaßen sie auch männliche Teilidentitäten – wie auch umgekehrt.

DIVERZITA MUŽSKÝCH IDENTÍT NA POHREBISKÁCH VČASNEJ AŽ STREDNEJ DOBY LATÉNSKEJ V STREDNEJ EURÓPE

Súhrn

Vedeckej diskusii o mužskej identite v dobe železnej dominujú úvahy o bojovníckej identite. Len zlomok počtu mužských zomrelých sa však dá označiť za bojovníkov. Projekt skúmal alternatívne mužské identity. Veľkou výhodou je mimoriadny korpus hrobov, resp. pohrebísk z doby laténskej z oblasti záujmu na Slovensku, vo východnom Rakúsku a na Morave. V tejto súvislosti je potrebné spomenúť metódy archeológie rodu (genderu), ktoré majú významný vplyv na vedecký výskum. V prvom roku projektu sa realizoval zber dát o pohrebiskách staršej (a strednej) doby laténskej v archíve Archeologického ústavu SAV v Nitre. Spomedzi nich uvediem napr. Dvory nad Žitavou, Holiare, Horný Jatov – Trnovec nad Váhom, Hurbanovo-Abadomb and Hurbanovo-Bacherov majer. Podarilo sa získať aj údaje a plány nepublikovaného pohrebiska v Palárikove. Z publikovaných pohrebísk sa získali dáta aj z Bučian, Dubníka a Mane. Dáta sa zbierali aj v rakúskych inštitúciách – Naturhistorisches Museum, Universität Wien, Institut für Urgeschichte und Historische Archäologie, Bundesdenkmalamt, Museum Mannersdorf/Leithagebirge – odkiaľ pochádzajú údaje a plány publikovaných (Pottenbrunn, Mannersdorf, Au am Leithaberge, Getzersdorf a d.), ako aj nepublikovaných (Oberndorf/Ebene, Ossarn, Franzhausen, Walpersdorf, Rassing, Göttlesbrunn a d.) pohrebísk. V druhom roku projektu pokračovalo zbieranie dát vo všetkých uvedených inštitúciách a rozšírilo sa do moravských inštitúcií, predovšetkým do Moravského zemského muzea v Brne, kde som získal materiál z publikovaných nekropol Brno-Maloměřice, Brno-Chrlice, Holubice, Křenovice a Blučina. V roku 2017 sa k databáze pridali nepublikované dáta z okresov Hodonín, Kroměříž, Olomouc, Opava, Prostějov, Přerov, Uherské Hradiště a Zlín. V roku 2018 som sa sústredil na kontrolu zozbieraných údajov, na ich spracovanie a analýzu. Významným momentom bolo úspešné zorganizovanie plánovaného workshopu „Multiple femininities – multiple masculinities: the diversity of gendered identities in the Bronze and Iron Ages“ (v spolupráci s Katharinou Rebay-Salisbury z inštitútu OREA Rakúskej akadémie vied a nositeľkou ERC projektu „The value of mothers to society“) v lokalite Klement-Oberleis (29.–30. september 2016). 25 bádateľov zo siedmich krajín sa venovalo rodovým sociálnym rolám, ich konceptualizácii a ich vnímaniu v populáciách mladšieho praveku. Ďalší workshop bol zorganizovaný v roku 2018 v Nitre s názvom a nosnou témou „Diversity of Identities in Prehistory, Early history, and the Present“ (29.–30. október 2018). V priebehu dvoch dní sa podujatia zúčastnilo 60 bádateľov z ôsmich krajín. V priebehu trojročného projektu sa podarilo identifikovať niekoľko konkrétnych príkladov zodpovedajúcich téme projektu. Na pohrebisku na lokalite Oberndorf/Ebene možno napr. spomenúť hrob 102 (skúmaný v roku 1982), v ktorom bola pochovaná 40–55-ročná žena s opaskom na pripnutie zbraní, čiže s mužským atribútom; podobne v hrobe 9 (1982) nie je jasné, či v hrobe so železným mečom bol pochovaný mužský alebo ženský jedinec. Bolo vybratých aj niekoľko mužských hrobov bez alebo len s chudobným inventárom. Na pohrebisku Walpersdorf a Franzhausen sa podarilo identifikovať špeciálny typ osobnej identity – konkrétne identitu lukostrelca. Spája sa s príslušnosťou k skupine poľovníkov alebo k špecializovanej vojenskej skupine miestnych „bojovníkov“. V Inzensdorfe sa ukazuje, že existuje veľký rozdiel medzi skupinou mladých, ozbrojených mužov s bohatou výbavou a skupinou niekoľkých starých a „chudobných“ jedincov (napr. č. 288). V Palárikove mali dvaja jedinci (muž, 16–20 rokov + muž, 35 rokov) náhrdelníky, čo je v našom priestore absolútne nezvyčajné, keďže obyčajne ide o atribúty ženskej hrobovej výbavy. Na pohrebisku v Chotíne sa tiež objavili špecifické prípady hrobov (muž, 30–40 rokov + muž, 20–30 rokov), v ktorých muži mali nánožníky, ktoré sú (viac než) typické pre ženské hroby. Jeden z týchto hrobov (Chotín, hrob 12) bol podrobený analýze DNA, ktorou sa potvrdilo antropologické určenie pohlavia. Dajú sa očakávať aj výsledky po analýzach DNA celých laténskych pohrebísk vo východnom Rakúsku, na juhozápadnom Slovensku a na južnej Morave. Dá sa odhadovať, aké postavenie v spoločnosti mali muži bez zbraní. Muži bez zbraní, vybavení prsteňmi z drahých kovov, mohli byť vnímaní ako *starí*, *múdri* či *skúsení* muži. Analyzovali sa aj identity rôzneho veku či životných fáz a podarilo sa definovať identitu *chlapca*, *starého muža* a *chudobného muža*. Identi-

fikovali sa aj špeciálne identity s nejasným významom, ako napr. *muži so „ženskými“ súčasťami kroja, ženy so zbraňami, druidi, remeselníci, špeciálne skupiny bojovníkov (lukostrelci)* a pod. Okrem teórií o rode a identite bolo možné overiť či vyvrátiť niektoré hypotézy aj pomocou DNA analýz.

V poslednom roku projektu sa podarilo realizovať antropologické analýzy kostených pozostatkov z doteraz nepublikovaných rakúskych pohrebísk Friederikou Novotny. Tie sa sústredili na vybraných 12 jedincov z pohrebísk na lokalitách Walpersdorf a Franzhausen Mitte v údolí rieky Traisen. Hoci bolo vytipovaných len málo jedincov, analýzy odhalili významné prípady (chronických) ochorení, opotrebenia zubov, opotrebenia v dôsledku špecifických fyzických aktivít a perimortálnych zranení. Výnimočné sú obidva dvojhroby – hrob FH 590 dospeljej ženy a jej nenarodeného dieťaťa s dokladmi perimortálnych traumatických poranení, a hrob FH 814 dvoch detí pochovaných s netypickou sponou v hrobovej výbave s niekoľkými patologickými javmi a perimortálnymi traumatickými poraneniami, ako aj s rezmi na postkraniiálnom skelete.

Genetická analýza archeologických ľudských kostených pozostatkov je už rutinný postup vďaka novej generácii sekvenčnej metodológie. Joscha Gretzinger na Stepham Schiffels (Jena) získali genetické dáta pre osem z deviatich analyzovaných jedincov z troch archeologických nálezísk na Slovensku (Pálárikovo, Chotín a Dubník). Analýzami sa podarilo presvedčivo určiť genetické pohlavie na ôsmich úspešných vzorkách, a tiež predbežné informácie o príbuzenskej línii dvoch z analyzovaných vzoriek. Stav zachovanosti DNA na troch analyzovaných lokalitách bol výnimočne dobrý. S úspechom sme získali ľudskú DNA, až do 60 % vo vzorke PAL001, zo všetkých okrem jedného individua.

Záverom je potrebné povedať, že rola mužských jedincov bola oveľa rôznorodejšia, než sa doteraz myslelo. Muži sa nedajú posudzovať len ako časť skupiny zbraňami vybavených „bojovníkov“, ale aj ako príslušníci neozbrojených spoločenských skupín s odlišnými charakteristikami. Najvýznamnejšia bola príslušnosť k spoločenským vrstvám podľa veku. Identifikovali sme mužských jedincov so ženskými atribútmi i ženských s mužskými znakmi – tie sa tak stávali súčasťou mužských identít – čo platilo aj v opačnom prípade.

Preklad Lucia Benediková

FÉRFI IDENTITÁSOK SOKFÉLESEGE KORA ÉS KÖZÉPSŐ LA TÉNE KORSZAK TEMETŐIBEN KÖZÉP-EURÓPÁBAN

Összefoglalás

A vaskori férfi identitásról folyó vitát mindeddig a „harcos identitás” gondolata határozta meg. Ugyanakkor a talált temetkezésekben az elhunytak csupán csekély részét helyezték felfegyverezve a sírba. E projekt keretében az alternatív férfi identitások vizsgálatára került sor. A laténekori sírok illetve temetők igen jelentős száma nagy előnyt jelentett a kutatási területen – Szlovákiában, Kelet-Ausztriában és Morvaországban. Módszereinél a gender-régészetet szükséges említeni, amely a kutatásra már igen nagy befolyással bír. A projekt első évében a SZTA nyitrai Régészeti Intézetének adattárában a koralatène korú temetőkre vonatkozó adatok összefoglalása történt. Itt a Dvory nad Žitavou, Holiare, Horný Jatov – Trnovec nad Váhom, Hurbanovo-Abadomb és a Hurbanovo-Bacherov Majer temetőterképeit és adatait vettük fel. A még publikálatlan palárikovoi temető térképei és adatai is rendelkezésre álltak. A publikált anyagból pedig a bučany-i, dubníki és maňai temetők anyagának felvétele történt. Ugyanakkor az ausztriai intézményekben, így a Naturhistorisches Museumban, a Bécsi Egyetem, Institut für Urgeschichte und Historische Archäologie-ban és mindenekelőtt a Múemlékvédelmi Hivatalban és Mannersdorf/Leithagebirge múzeumában történt a publikált temetők (Pottenbrunn, Mannersdorf, Au am Leithaberge, Getzersdorf stb.), valamint a publikálatlanok (Oberndorf/Ebene, Ossarn, Franzhausen, Walpersdorf, Rassing, Göttlesbrunn stb.) adatainak és térképeinek felvétele. A második évben az említett intézményekben folytatódott az adatfelvétel és főként a brnoi Moravské Zemské Múzeumban került sor a Brno-Maloměřice, Brno-Chrlice, Holubice, Křenovice vagy Blučina stb. temetők bevonásával az adatgyűjtésre. 2017-ben a Hodonín, Kroměříž, Olomouc, Opava, Prostejov, Přerov, Uherské Hradiště és Zlín járások (akkor még) publikálatlan anyagait dolgoztuk fel. 2018. év a gyűjtött adatok ellenőrzésével, valamint azok feldolgozásával és kiértékelésével telt.

Fontos állomás volt a „Multiple femininities – multiple masculinities: nemi identitások sokrétűsége a bronz- és vaskorban” című workshop sikeres megszervezése és lebonyolítása (Katharina Rebay-Salisburyval közösen [Osztrák Tudományos Akadémia OREA, ERC-Projekt: „The value of mothers to society”) 2016. szeptember 29/30-án Klement-Oberleisban. Hét országból 25 résztvevő vitatta meg a nemspecifikus társadalmi szerepeket, a felfogásokat és az őskori emberhez való hozzárendelést. 2018-ban ismét egy workshopot szerveztünk (ezúttal Nyitrán) a „Diversity of Identities in Prehistory, Early history, and the Present” (2018. október 29/30) témával. A kétnapos workshopon 8 országból közel 60 kolléga vett részt. Az említett kutatási téma több esetét találtuk mindhárom évben: Az Oberndorf/Ebene temetőben, például a 102 (1982). sír különleges esete említhető, amelyben egy 40–55. éves nőt fegyverövével, tehát egy férfiakra jellemző tárggyal, temettek el. A 9 (1982). sírnál esetében szintén nem világos, hogy a vaskarddal férfit vagy nőt temette-e el. Néhány férfi egyed melléklet nélkül vagy csupán csekély értékű sírmelléklettel lehetett kiállítva. A walpersdorfi és franzhauseni temetőkben a személyes identitások különös fajtáit lehetett találni, ebben az esetben az íjászokét. Őket vadászokként vagy a helyi „harcosok” egy speciális harcos csoportjaként lehet magyarázni. Inzersdorfbán részvizsgálat eredményezte, hogy nagy ellentmondás áll fenn a fiatal, felfegyverzett és gazdag mellékletű férfiak és a csupán néhány fegyvertelen és szegényes mellékletű öreg férfi között (pl.: Nr. 288). Palárikovoban két egyed (férfi, 16–20 éves) és (férfi, 35 éves) viselt nyakperect, amely a kutatási területünkön teljesen szokatlan volt. Normális esetben ugyanis női ismertetőjegyről van szó. A chotini temetőben más különleges esetek fordultak elő, mint például a 12. (férfi, 30–40 éves) és 30. (férfi, 20–30 éves) sírok esetében, ahol a férfiak lábperceket viseltek, amelyek (*többségében*) tipikusan a nőkre jellemzőek. Ezen esetek egyikét (Chotín, 12. sír) DNS-vizsgálat alá vetettük és megerősítésre került a nembeli meghatározás. Mindhárom évben több esete megfigyelhető volt az említett kutatási témának a kelet- ausztriai, délnyugat-szlovákiai és dél-morva koralatène temetőinek elemzésénél. Láthatjuk, milyen szerepet játszottak a fegyver nélküli férfiak e társadalmakban. A fegyvertelen és nemesfém gyűrűvel bíró férfiak státusza már koruknál fogva is a „bölcös illetve tapasztalt” férfiaké. Különféle identitások kerültek vizsgálatra az egyes életstádiumokban és a fiatal férfiak valamint öreg férfiak, valamint

a szegény emberek ki lettek vonva. Speciális identitások tisztázatlan hozzátartozással (férfiak „női” karikaviselettel, nők fegyverekkel stb.), druida- és kézműves identitások valamint speciális harcos csoportok (mint íjászok) kerültek azonosításra. A nemre és identitásra vonatkozó elméleti magyarázatokat néhány esetben DNS vizsgálatok erősítették illetve cáfolták meg.

2018-ban lehetővé vált, hogy Friederike Novotny (Wien) a még közöletlen temető csontvázainak antropológiai vizsgálatát Ausztriában elvégezze. A középpontban a walpersdorfi és a traisenvölgyi Franzhausen Mitte temetőkből egy 12 fős kiválasztott mintavétel állt. Ez csupán kevés egyedből állt, mégis a mintavétel figyelemreméltó eseteit mutatta (krónikus) betegségeknek, mesterséges fogkopásnak, bizonyos aktivitásmintáknak és perimortális traumás sérüléseknek. Különleges a két kettős temetkezés a Franzhausen-i temetőben. Az 590. sír felnőtt nővel és a még meg nem született gyermekével perimortális traumás sérülésekre vonatkozó nyomokat mutat. Továbbá a 814. sír, amelyben a két gyermeket különleges fibulákkal és súlyos patológiai állapotban, perimortális traumás sérülésekkel temették el. A csontvázakon posztkraniális vágások láthatóak.

Az emberi csontvázak régészeti maradványainak genetikai vizsgálatai köszönhetően a következő generációs szekvencia módszereknek rutinvizsgálatokká váltak. Joscha Gretzinger és Stephan Schiffels (Jena) három szlovákiai temetőből (Palárikovo, Chotín és Dubník) származó kilenc megvizsgált személyből nyolctól nyertek genetikai adatokat. E vizsgálatok lehetővé tették, hogy a nyolc eredményes próba genetikai nemét, valamint előzetes származási információikat biztosan kivizsgálhassák két elemzett próba esetében. A DNA-konzerválás figyelemreméltóan jó volt a három vizsgált helyen. Az emberi DNA-t, amely a PAL001-ben 60%-t ért el, egy személy kivételével mindegyikre sikeresen lehívták. Összefoglalva elmondható, hogy a férfi egyedek szerepei sokkal sokrétűbbek voltak, mint azt eddig feltételezték. A férfiak nem csak a fegyverekkel felszerelt „harcosok” közé tartoztak, hanem más fegyvertelen osztályokhoz is, melyek különféle jellemző vonásokat mutattak. Megemlítendő, hogy a legfontosabb szerepet az életkori osztályok játszották. Láttunk mind férfi egyedeket női, mind pedig nőit férfi jellemzőkkel – tehát ők is bírtak férfi részidentitással – amint az fordítva is igaz.

Fordítás Péter Prohászka

LITERATURE

- Adler/Offenberger 1970 H. Adler/J. Offenberger: Sommerein am Leithagebirge. *Fundberichte aus Österreich* 9, 1970, 254–255.
- Babić 2005 St. Babić: Status identity and archaeology. In: M. Diaz-Andreu/S. Lucy/S. Babić/D. Edwards (Ed.): *The Archaeology of Identity. Approaches to Gender, Age, Status, Ethnicity and Religion*. London 2005, 67–85.
- Bálek et al. 2003 M. Bálek/T. Berkovec/P. Kos/M. Lečbych/A. Matějčíková/D. Parma/M. Přichystal/M. Šmíd: Předběžné výsledky první etapy záchranného archeologického výzkumu v trase dálnice D1 Vyškov – Mořice. *Přehled výzkumů* 44, 2003, 137–150.
- Barnard/Spencer 1996 A. Barnard/J. Spencer (Ed.): *Encyclopedia of Social and Cultural Anthropology*. London – New York 1996.
- Baumgartner 1906 G. Baumgartner: Prähistorische Funde nächst Getzersdorf (N.-Ö.). *Mitteilungen k. k. Zentralkommission* 5, 1906, 287–296.
- Baxter 2005 D. Baxter: Altruism, Grief, and Identity. *Philosophy and Phenomenological Research* 70/2, 2005, 371–383.
- Benadik 1955 B. Benadik: Laténske nálezy z Ponitria na Slovensku. *Archeologické rozhledy* 7, 1955, 772–776.
- Benadik 1960 B. Benadik: Ein keltisches Gräberfeld in Bajč-Vlkanovo. *Slovenská archeológia* 8, 1960, 393–451.
- Benadik 1975a B. Benadik: Keltské pohrebisko v Palárikove (Keltisches Gräberfeld in Palárikovo). *Archeologické výskumy a nálezy na Slovensku v roku 1974*, Nitra 1975, 22–24.
- Benadik 1975b B. Benadik: Besonders angelegte Gräber auf keltischen Gräberfeldern der Slowakei und ihre gesellschaftliche Bedeutung. Ausgrabung des Gräberfeldes in Palárikovo und sein Charakter. *Alba Regia* 14, 1975, 97–106.
- Benadik 1978 B. Benadik: Keltisches Gräberfeld in Maňa. *Slovenská archeológia* 26, 1978.
- Benadik 1981 B. Benadik: Bronzový lekythos z keltského hrobu v Hurbanove, okr. Komárno. In: M. Buchvaldek/J. Sláma (Hrsg.): K počtĕ 80. narozenin akademika Jana Filipa.: *Præhistorica 8 – Varia Archaeologica* 2. Praha 1981, 191, 192.
- Benadik 1983 B. Benadik: *Maňa. Keltisches Gräberfeld*. Fundkatalog. Materialia Archaeologica Slovaca V. Nitra 1983.
- Benadik 1984 B. Benadik: Keltské mince v hroboch na Slovensku. *Slovenská numizmatika* 8, 1984, 97–104.
- Benadik et al. 1957 B. Benadik/E. Vlček/C. Ambros: *Keltské pohrebiská na juhozápadnom Slovensku* (Keltische Gräberfelder der Südwestslowakei). Bratislava 1957.
- Berglar 1987 P. Berglar: *Walther Rathenau. Ein Leben zwischen Philosophie und Politik*. Graz – Wien – Köln 1987.
- Binswanger et al. 2009 Chr. Binswanger/M. Bridges/B. Schnegg/D. Wastl-Walter (Hrsg.): *Gender Scripts: Widerspenstige Aneignungen von Geschlechternormen*. Politik der Geschlechterverhältnisse 40. Frankfurt am Main – New York 2009.
- Bistáková/Březinová/Ramsl 2020 A. Bistáková, G. Březinová, P. C. Ramsl (eds.): *Multiple identities in prehistory, early history and presence*. Proceedings of the SASPRO workshops in Klement (Austria) 2016 and Nitra (Slovakia) 2018. *Archaeologica Slovaca Monographiae – Communicationes XXIV*, Nitra 2020.
- Blackwood 1984 E. Blackwood: Sexuality and Gender in Certain Native American Tribes. The Case of Cross-Gender Females. *Signs* 10/1, 1984, 27–42.
- Bleibtreu-Ehrenberg 1970 G. Bleibtreu-Ehrenberg: Homosexualität und Transvestition im Schamanismus. *Anthropos* 65, 1970, 189–228.
- Blesl 2010 Chr. Blesl: Neue archäologische Forschungen im Raum Poysdorf, Niederösterreich: Poysdorf-Laaerstrasse, Siedlungen und Gräber aus sechs Jahrtausenden. *Urgeschichte in Niederösterreich: Eine Bestandsaufnahme*. 21. Symposium des NÖ Instituts für Landeskunde. 2. bis 5. Juli 2001, Retz, Althof. St. Pölten 2010, 108–110.
- Blesl 2012 Chr. Blesl: *Zeugen der Vergangenheit – Archäologie im Unteren Traisental*. Fundberichte aus Österreich. Materialhefte Reihe A, Sonderheft 18. Wien 2012.

- Blesl/Gattringer 2004
Chr. Blesl/A. Gattringer: KG Oberndorf in der Ebene. *Fundberichte aus Österreich* 43, 2004, 29.
- Bönt 2012
R. Bönt: *Das entehrte Geschlecht*. München 2012.
- Böhnisch 2003
L. Böhnisch: *Die Entgrenzung der Männlichkeit. Verstörungen und Formierungen des Mannseins im gesellschaftlichen Übergang*. München 2003.
- Bortlík 1906
J. Bortlík: Grabfunde aus Mannersdorf (NÖ). *Mitteilungen der k. k. Zentralkommission* 3. F. V, 1906, 8, 9.
- Bourdieu 1973
P. Bourdieu: The Berber House. In: M. Douglas (Ed.): *Rules and Meanings. The Anthropology of Everyday Knowledge*. Harmondsworth 1973, 98–110.
- Bourdieu 1976
P. Bourdieu: *Entwurf einer Theorie der Praxis aus der ethnologischen Grundlage der kabyllischen Gesellschaft*. Frankfurt am Main 1976.
- Bourdieu 1977
P. Bourdieu: *Outline of a Theory of Practice*. Cambridge 1977.
- Bourdieu 1997
P. Bourdieu: Die Männliche Herrschaft. In: I. Dölling/B. Kraus (Hrsg.): *Ein alltägliches Spiel. Geschlechterkonstruktion in der sozialen Praxis*. Frankfurt am Main 1997, 153–217.
- Bouzek 2002
J. Bouzek: Die Bronzelekythos des Typus Talcott aus Hurbanovo und andere vorrömische mediterrane Bronzegefäße in der Slowakei. In: *Studies of the Ancient World. In Honour of Mária Novotná. Anodos* 2. Trnava 2002, 53–57.
- Brandes 2002
H. Brandes: *Der männliche Habitus*. Band 2. Männerforschung und Männerpolitik. Opladen 2002.
- Brather 2008
S. Brather: Bestattungsrituale zur Merowingerzeit – Frühmittelalterliche Reihengräber und der Umgang mit dem Tod. In: Ch. Kümmel/B. Schweizer/U. Veit (Hrsg.): *Körperinszenierung – Objektsammlung – Monumentalisierung: Totenritual und Grabkult in frühen Gesellschaften. Archäologische Quellen in kulturwissenschaftlicher Perspektive*. Tübinger Archäologische Taschenbücher 6. Münster 2008, 151–180.
- Brosseder 2006
U. Brosseder: Ebenen sozialer Identitäten im Spiegel des Zeichensystems hallstattzeitlicher Keramik. In: St. Burmeister/N. Müller-Scheeßel (Hrsg.): *Soziale Gruppen – kulturelle Grenzen*. Tübinger Archäologische Taschenbücher 5. Münster 2006, 119–138.
- Brubaker 2004
R. Brubaker: *Ethnicity without Groups*. Cambridge – London 2004.
- Bruhns 2002
K. Bruhns: Gewaltbereitschaft von Mädchen – Wandlungstendenzen des Geschlechterverhältnisses? In: R.-M. Dachweiler/R. Schäfer (Hrsg.): *Gewalt-Verhältnisse. Feministische Perspektiven auf Geschlecht und Gewalt*. Frankfurt am Main – New York 2002, 171–200.
- Březinová 1999
G. Březinová: Sídliisko z doby laténskej v Bajči-Vlkanove (Siedlung aus der Latènezeit in Bajč-Vlkanovo). *Študijné zvesti AÚ SAV* 33, 1999, 197–214.
- Březinová 2012
G. Březinová: The Biritual Cemetery at Šurany-Nitriansky Hrádok, District of Nové Zámky, Slovakia. In: S. Berecki (Ed.): *Iron Age Rites and Rituals in the Carpathian basin*. Proceedings of the International Colloquium from Târgu Mureş, October 2011. *Târgu Mureş* 2012, 259–271.
- Brezňanová/Furman 2012
G. Brezňanová/M. Furman: Laténske nálezy v zbierkach Slovenského Banského múzea v Banskej Štiavnici. In: G. Březinová/V. Varsik (Ed.): *Archeológia na prahu histórie. K životnému jubileu Karola Pietu*. Nitra 2012, 59–82.
- Bučíková 1985
E. Bučíková: Keltské kostrové pohrebisko v Nechvalíne. *Študijné zvesti AÚ SAV* 21, 1985, 137–86.
- Bujna 1976
J. Bujna: Záchraný výskum kostrového pohrebiska z doby laténskej v Chotíne (Rettungsgrabung auf einem latènezeitlichen Skelettgräberfeld in Chotín). *Archeologické výskumy a nálezy na Slovensku* 1975, Nitra 1976, 73–75.
- Bujna 1982
J. Bujna: Spiegelung der Sozialstruktur auf latènezeitlichen Gräberfeldern im Karpatenbecken. *Památky archeologické* 73/2, 1982, 312–431.
- Bujna 1989
J. Bujna: Das latènezeitliche Gräberfelder bei Dubník I. *Slovenská archeológia* 37, 1989, 245–334.
- Bujna 1991a
J. Bujna: The necropolis at Bučany. In: *The Celts*. Bompiani. Milan 1991, 191.
- Bujna 1991b
J. Bujna: Das latènezeitliche Gräberfeld bei Dubník. II. Analyse und Auswertung. *Slovenská archeológia* 39, 1991, 221–256.
- Bujna 1993
J. Bujna: Hermann Parzinger, Chronologie der Späthallstatt- und Frühlatènezeit. Studien zu Fundgruppen zwischen Mosel und Save. Quellen und

- Forschungen zur prähistorischen und provinzialrömischen Archäologie, *Acta Humanioria* 1988, Weinehim 1989 (rec.). *Slovenská archeológia* 41, 1993, 140–142.
- Bujna 1995a J. Bujna: *Malé Kosihy – Latènezeitliches Gräberfeld*. Katalog. Archaeologica Slovaca Monographiae VII. Nitra 1995.
- Bujna 1995b J. Bujna: Les contacts entre l'Europe centrale et la Gaule septentrionale au III^e s. avant J.-C.: la sépulture no 31 de Malé Kosihy, Slovaquie du Sud-Ouest. In: *L'Europe celtique du Ve au IIIe s. avant J.-C. Actes du deuxième symposium international d'Hautvillers 1992. Mémoires no 9 de la Société archéologique champenoise*. Gent 1995, 259–263.
- Bujna 1998 J. Bujna: Reich ausgestattete Brandgräber mit Holzeinbau auf dem Gräberfeld in Malé Kosihy. Reflexionen und Hypothesen über die Bestattungssitten der Kelten, *Slovenská archeológia* 46, 1998, 289–308.
- Bujna 2007 J. Bujna: Das reich ausgestattete Kriegergrab aus dem keltischen Gräberfeld von Hurbanovo-Kokoľ (Bez. Komárno), südwestliche Slowakei. Festschrift für Miloš Čižmář. *Pravěk (Nová řada)* 16, 2007, 226–242.
- Bujna 2012a J. Bujna: Bajč, Slowakei. In: *Sievers/Urban/Ramsl 2012*, 107–109.
- Bujna 2012b J. Bujna: Palárikovo, Slowakei. In: *Sievers/Urban/Ramsl 2012*, 1439–1441.
- Bujna/Romsauer 1983 J. Bujna/P. Romsauer: Späthallstatt- und frühlatènezeitliches Gräberfeld in Bučany. *Slovenská archeológia* 31, 1983, 277–324.
- Burmeister/Müller-Scheeßel 2006 St. Burmeister/N. Müller-Scheeßel (Hrsg.): *Soziale Gruppen – kulturelle Grenzen. Die Interpretationen sozialer Identitäten in der Prähistorischen Archäologie. Tübinger Archäologische Taschenbücher 5*. Münster 2006.
- Čambal 2012 R. Čambal: Frühlatènezeitliche Gräberfeld von Stupava. Ausgrabungen in Jahre 1929. *Zborník SNM – Archeológia* 22, 2012, 87–119.
- Carneiro 1981 R. Carneiro: The chiefdom: Precursor of the state. In: G. Jones/R. Krautz (Ed.): *The Transition of Statehood in the New World*. Cambridge 1981, 37–79.
- Carrigan/Connell/Lee 1985 T. Carrigan/B. Connell/J. Lee: Toward a New Sociology of Masculinity. *Theory and Society* 14/5, 1985, 551–604.
- Carroll 2003 B. E. Carroll (Hrsg.): *American Masculinities: A Historical Encyclopedia*. New York 2003.
- Chleborád 1930 M. Chleborád: Gallské pohřebiště u Bučovic. Ročenka spořitelny města Bučovic. Bučovice 1930.
- Čižmář 1970 M. Čižmář: Addenda k laténskému pohřebišti v Pustiměřských Prusích, obec Pustiměř, okr. Vyškov. *Archeologické rozhledy* 22, 1970, 599–600.
- Čižmář 1985 M. Čižmář: Laténské pohřebiště v Bedřichovicích, okr. Brno-venkov. *Archeologické rozhledy* 37, 1985, 442–445.
- Čižmář/Geislerová 2006 M. Čižmář/K. Geislerová: *Výzkumy – Ausgrabungen 1999–2004*. Brno 2006.
- Čižmářová 1990 J. Čižmářová: Laténské pohřebiště v Brně-Chrlicích. *Archeologické rozhledy* 42, 1990, 257–268.
- Čižmářová 2004 J. Čižmářová: *Encyklopedie Keltů na Moravě a ve Slezsku*. Praha 2004.
- Čižmářová 2005 J. Čižmářová: *Das keltische Gräberfeld in Brno-Maloměřice*. *Pravěk Supplementum* 14. Brno 2005.
- Čižmářová 2009 J. Čižmářová: *Keltische Gräberfelder Holubice und Křenovice*. *Pravěk Supplementum* 19. Brno 2009.
- Čižmářová 2011 J. Čižmářová: *Keltische Gräberfelder in Mähren – Bezirke Brno-město und Brno-venkov*. Brno 2011.
- Čižmářová 2013 J. Čižmářová: *Keltische Gräberfelder in Mähren – Bezirke Blansko und Vyškov*. Brno 2013.
- Čižmářová 2017 J. Čižmářová: *Keltische Gräberfelder in Mähren – Bezirke Hodonín, Kroměříž, Olomouc, Opava, Prostějov, Přerov, Uherské Hradiště und Zlín*. Brno 2017.
- Čižmářová/Geislerová 1990 J. Čižmářová/K. Geislerová: Záchranný výskum v Brně-Horních Heršpicích (okr. Brno-město). *Přehled výzkumů* 1987, 1990, 89–90.
- Clatterbaugh 1990 K. Clatterbaugh: *Contemporary perspectives on masculinity. Men, women, and politics in modern society*. Westview 1990.
- Collis 2000 J. Collis: «Celtic» Oppida. In: M. H. Hansen (Ed.): *A Comparative Study of Thirty City-State Cultures*. Copenhagen 2000, 229–239.

- Collis 2010 J. Collis: Zentralisierung und Urbanisierung in Europa nördlich der Alpen während der Eisenzeit. In: D. Krause (Ed.): „Fürstensitze“ und Zentralorte der frühen Kelten. Stuttgart 2010, 77–91.
- Connell 1987 R. W. Connell: *Masculinities*. Cambridge 1987.
- Connell 1999 R. W. Connell: *Der gemachte Mann. Konstruktion und Krise von Männlichkeiten*. Wiesbaden 1999.
- Connell 2006 R. W. Connell: *Der gemachte Mann. Konstruktion und Krise von Männlichkeiten*. Opladen 2006.
- Daim 1982 F. Daim: Gedanken zum Ethnosbegriff. *Mitteilungen der Anthropologischen Gesellschaft in Wien* 62, 1982, 58–71.
- Davidović 2006 A. Davidović: Identität – ein unscharfer Begriff. Identitätsdiskurse in den gegenwartsbezogenen Humanwissenschaften. In: St. Burmeister/N. Müller-Scheeßel (Hrsg.): *Soziale Gruppen – kulturelle Grenzen*. Die Interpretationen sozialer Identitäten in der Prähistorischen Archäologie. Tübinger Archäologische Taschenbücher 5. Münster 2006, 39–58.
- Díaz-Andreu 2005 M. Díaz-Andreu: Gender identity. In: M. Díaz-Andreu/S. Lucy/S. Babić/D. N. Edwards: *The Archaeology of Identity*. New York 2005, 13–42.
- Díaz-Andreu/Lucy 2005 M. Díaz-Andreu/S. Lucy: Introduction. In: M. Díaz-Andreu/S. Lucy/S. Babić/D. N. Edwards: *The Archaeology of Identity*. New York 2005, 1–12.
- Dizdar/Ljuština 2019 M. Dizdar/M. Ljuština: My mother was a tailor... Women from the Middle La Tène culture cemetery Zvonimirovo-Veliko polje who made the spinning threads and clothes. *Arheološki vestnik* 70, 2019, 49–91.
- Dohnal/Ondruš 1964 V. Dohnal/V. Ondruš: Výzkum na laténském pohřebišti v Mistríně u Kyjova. *Archeologické rozhledy* 16, 1964, 169–175.
- Doneus 2015 M. Doneus: Das Luftbild als Grundlage für Siedlungs- und Landschaftsarchäologie. In: M. Doneus/M. Griebel (Hrsg.): *Die Leitha – Facetten einer Landschaft*. Archäologie Österreichs Spezial 3. Wien 2015, 25–38.
- Durkheim [1912] 1947 E. Durkheim: *The elemental Forms of religious life*. New York 1947.
- Dušek 1956 M. Dušek: Sídliště z doby laténskej v Chotíne na Slovensku. *Archeologické rozhledy* 8, 1956, 668–678.
- Dušek 1960 M. Dušek: Keltské pohrebisko vo Svätom Petri. *Slovenská archeológia* 8, 1960, 457–469.
- Dušek 1961 M. Dušek: K otázkam pravekého vývoja juhozápadného Slovenska (Zu den Fragen der urgeschichtlichen Entwicklung der Südwestslowakei). *Študijné zvesti AÚ SAV* 6, 1961, 59–82.
- Duval 1982 P.-M. Duval: Comment analyser, reproduire et expliquer les formes d'art celtique. In: P.-M. Duval/V. Kruta (Ed.): *L'art celtique de la période d'expansion IV^e et III^e siècles avant notre ère*. Paris 1982, 3–23.
- Echt 1999 R. Echt: *Das Fürstinnengrab von Reinheim*. Studien zur Kulturgeschichte der Früh-La-Tène-Zeit. Saarbrücker Beiträge zur Altertumskunde 69. Bonn 1999.
- Egg 1999 M. Egg: Waffenbrüder? Eine ungewöhnliche Bestattung der Frühlatènezeit in Novo mesto in Slowenien. *Jahrbuch RGZM* 46/2, 1999, 317–356.
- Ehrenberg 1822 F. Ehrenberg: *Der Charakter und die Bestimmung des Mannes*. Elberfeld 1822.
- Eibner 1974 C. Eibner: Das späturnenfelderzeitliche Gräberfeld von St. Andrä v. d. Hgt. P. B. Tulln, NÖ. Aussagewert und Aussagegrenzen von Brandbestattungen für eine historische Interpretation. *Archaeologia Austriaca* 12. Wien 1974.
- Eibner 1981 C. Eibner: Frühlatènezeitliches Brandgrab. In: J.-W. Neugebauer: *Herzogenburg-Kalkofen*. Fundberichte aus Österreich. Materialheft A1. Wien 1981, 30, 31.
- Eisner 1939 J. Eisner: Archeologický výzkum, podniknutý Vlastivedným museem slovenským v Bratislavě v roce 1936. *Bratislava. Časopis pro výzkum Slovenska a Podkarpatské Rusi* 10, 1936, 479–482.
- Enderová 1994 P. Enderová: Časné laténské sídliště v Brně-Horních Heršpicích, okr. Brno-město a Slavíkovcích, okr. Vyškov. *Pravěk*. Nová řada 4, 1994, 233–252.
- Engelhardt 1969 K. Engelhardt: Latènezeitliche Gräber aus Ossarn, p. B. St. Pölten, NÖ. *Archaeologia Austriaca* 45, 1969, 26–52.
- Engelhardt 1976 K. Engelhardt: *Bronzezeitliche und latènezeitliche Gräber aus Ossarn*. [Festschrift R. Pittion]. *Archaeologia Austriaca*. Beih. 13. Wien 1976, 362–396.

- Fernández-Götz 1994
F. Fernández-Götz: *Identity and Power. The Transformation of Iron Age Societies in Northeast Gaul*. Amsterdam 1994.
- Filip 1956
J. Filip: *Keltové ve střední Evropě*. Praha 1956.
- Flood et al. 2007
M. Flood/J. K. Gardiner/B. Pease/K. Pringle (Hrsg.): *International Encyclopedia of Men and Masculinities*. London – New York 2007.
- Forgey 1975
D. G. Forgey: The Institution of Berdache among the North American Plains Indians. *The Journal of Sex Research* 11/1, 1975, 1–15.
- Friesinger/Daim 1990
H. Friesinger/F. Daim (Hrsg.): *Typen der Ethnogenese unter besonderer Berücksichtigung der Bayern*. Wien 1990.
- Fulton/Anderson 1992
R. Fulton/St. W. Anderson: The Amerindian "Man-Woman". Gender, Liminality, and Cultural Continuity Source. *Current Anthropology* 33/5, 1992, 603–610.
- Gardelková-Vrtelová 2017
A. Gardelková-Vrtelová: *Pohrebisko Palárikovo v kontexte plochých keltských pohrebísk v strednom Podunajsku*. Dizertačná práca. Nitra – Bratislava 2017. Nепublikované.
- Gattringer 1971
A. Gattringer: Herzogenburg. *Fundberichte aus Österreich* 10, 1971, 54–55.
- Gebhard 1989
R. Gebhard: *Der Glasschmuck aus dem Oppidum von Manching*. Die Ausgrabungen in Manching 11. Stuttgart 1989.
- Gerold 2002
F. Gerold: Anthropologische Auswertung der latènezeitlichen Skelettreste des Gräberfeldes Pottenbrunn (Niederösterreich) unter besonderer Berücksichtigung der krankhaften und degenerativen Veränderungen. In: P. C. Ramsel: *Das eisenzeitliche Gräberfeld von Pottenbrunn, SG St. Pölten, Niederösterreich*. Fundberichte aus Österreich. Materialheft A11. Wien 2002, 303–336.
- Giddens 1984
A. Giddens: *The Constitution of Society: Outline of a Theory of Structuration*. Cambridge 1984.
- Ginoux/Ramsel 2014
N. Ginoux/P. C. Ramsel: Art and craftsmanship in elite-warrior graves: from boii to parisii and back again. .In: Chr. Gosden/S. Crawford/K. Ulmschneider (Ed.): *Celtic Art in Europe – making connections*. Oxford 2014, 274–295.
- Goláňová 2018
P. Goláňová: *The Early La Tène Period in Moravia*. Studien zur Archäologie Europas 32. Bonn 2018.
- Görföl 2017
M. Görföl: *Szakkolgozat a Hetényi (Chotín, SK). La Tène Temet Elemzése*. Szeged 2017.
- Grisard 2014
D. Grisard: Rosarot und Himmelblau. Die Farbe süßer Beeren und des Himmels bei prächtigem Jagdwetter – oder warum Mädchen Rosa lieben. In: B. Röder (Hrsg.): *Ich Mann. Du Frau. Feste Rollen seit Urzeiten?* Freiburg – Berlin 2014, 54–67.
- Guliaev 2003
V. I. Guliaev: Amazons in the Skythia: new finds at the Middle Don, Southern Russia. *World Archaeology* 35/1, 2003, 112–125.
- Hagemann-White 2002
C. Hagemann-White: Gewalt im Geschlechterverhältnis als Gegenstand sozialwissenschaftlicher Forschung und Theoriebildung. Rückblick: gegenwärtiger Stand. Ausblick. In: R.-M. Dachweiler/R. Schäfer (Hrsg.): *Gewalt-Verhältnisse. Feministische Perspektiven auf Geschlecht und Gewalt*. Frankfurt am Main – New York 2002, 29–52.
- Hagemann 2002
U. Hagemann: *Das Königreich Dahomey zwischen Sklavenhandel und französischer Kolonie*. Hannover 2002 bei geschichte.uni-hannover.de
- Haider 1984
W. Haider: KG Flatz, SG Ternitz, VB Neunkirchen. *Fundberichte aus Österreich* 23, 1984, 269–270.
- Halberstam 1998
J. Halberstam: *Female Masculinity*, Durham – London 1998.
- Hall 2007
J. M. Hall: *A History of the Archaic Greek World, ca. 1200–479 BCE*. Oxford 2007.
- Haruštiak 2009
J. Haruštiak: Vývoj pohrebného rítu na keltských pohrebiskách z územia Slovenska. *Slovenská archeológia* 57, 2009, 117–168;
- Herdits/Ramsel 1998a
H. Herdits/P. C. Ramsel: Ein Scheidenmundblech im östlichen Schwertstil aus Grab 562 in Pottenbrunn. *Archäologie Österreichs* 9/2, 1998, 54–58.
- Herdits/Ramsel 1998b
H. Herdits/P. C. Ramsel: Technotypologische Untersuchungen an Eisenobjekten im latènezeitlichen Gräberfeld von Pottenbrunn, NÖ. *Archäologie Österreichs* 9/2, 1998, 59–65.
- Hodson 1968
F. R. Hodson: *The La Tène Cemetery of Münsingen–Rain*. Acta Bernensia 5, 1968.

- Hoffmann 2007 A. Hoffmann: *Männerbeben. Das starke Geschlecht kehrt zurück*. Lichtschlag 2007.
- Hofmann 2014 K. P. Hofmann: Mädchen in der Prähistorie. Möglichkeiten und Grenzen des archäologischen Nachweises. In: S. Moraw/A. Kieburg (Hrsg.): *Mädchen im Altertum/Girls in Antiquity*. Frauen Forschung Archäologie 11. Münster 2014, 27–40.
- Horlacher/Jansen/Schwanebeck 2016 St. Horlacher/B. Jansen/W. Schwanebeck (Hrsg.): *Männlichkeit*. Ein interdisziplinäres Handbuch. Stuttgart 2016.
- Hotchkiss 1996 V. R. Hotchkiss: *Clothes Make the Man. Female Cross Dressing in Medieval Europe*. New York 1996.
- Holzer 2007 V. Holzer: Grabungsergebnisse vom keltischen Kultbezirk am Sandberg in Roseldorf. *Archäologie Österreichs* 18/1, 2007, 22–24.
- Hungerbühler 2009 A. Hungerbühler: Hegemoniale Maskulinität im Bergführerberuf? Empirische und theoretische Implikationen. In: Chr. Binswanger/M. Bridges/B. Schnegg/D. Wastl-Walter: *Gender Scripts. Widerspenstige Aneignungen von Geschlechternormen (Politik der Geschlechterverhältnisse)*. Frankfurt am Main – New York 2009, 119–141.
- Hunyady 1942 I. Hunyady: *Die Kelten im Karpatenbecken*. Dissertationes Pannonicae. Ser. II, No. 18, 1942.
- Jakab 1995 J. Jakab: Anthropologische Grundanalyse des birituellen Gräberfeldes in Malé Kosihy. In: *Bujna 1995a*, 183–210.
- Jakab, intern J. Jakab: *Antropologická analýza birituálneho laténskeho pohrebiska v Palárikove*. Internal report SAV.
- Jacobs 1987 S.-E. Jacobs: The Berdache. In: St. Murrey (Ed.): *Cultural Diversity and Homosexuality*. New York 1987, 269.
- Jacobs/Thomas/Lang 1997 S.-E. Jacobs/W. Thomas/S. Lang (Hrsg.): *Two-spirit people: Native American gender identity, sexuality, and spirituality*. University of Illinois Press. Urbana 1997.
- Jenkins 2008 R. Jenkins: *Rethinking Ethnicity. Arguments and Explorations*. Los Angeles 2008.
- Jerem 2012 E. Jerem: Pötttsching. In: *Sievers/Urban/Ramsl 2012*, 1507–1508.
- Ježek 2017 M. Ježek: *Archaeology of touchstones. An introduction based on finds from Birka, Sweden*. Leiden 2017.
- Jordan 2016 A. M. Jordan: Her Mirror, His Sword. Unbinding Binary Gender and Sex Assumption in Iron Age British Mortuary Traditions. *Journal of Archaeological Method and Theory* 23, 2016, 870–899.
- Jung 2008 M. Jung: Zur Überdeterminiertheit von Grabausstattungen. Eine Exemplifikation anhand des späthallstattzeitlichen Grabbefundes von Eberdingen-Hochdorf. In: Ch. Kümmel/B. Schweizer/U. Veit (Hrsg.): *Körperinszenierung – Objektsammlung – Monumentalisierung. Totenritual und Grabkult in frühen Gesellschaften*. Archäologische Quellen in kulturwissenschaftlicher Perspektive. Tübinger Archäologische Taschenbücher 6, 2008, 271–286.
- Kamp 2001 K. Kamp: Where Have All the Children Gone? The Archaeology of Childhood. *Journal of Archaeological Method and Theory* 8/1, 2001, 1–34.
- Karl 2007 R. Karl: From Head of Kin to King of a Country: the Evolution of Early Feudal Society in Wales. *Interpretierte Eisenzeiten 2. Studien zur Kulturgeschichte von Oberösterreich*, Folge 19. Linz 2007, 153–184.
- Karl 2012 R. Karl: Göttlesbrunn. In: *Sievers/Urban/Ramsl 2012*, 561–562.
- Karwowski 2006 M. Karwowski: *Thunau am Kamp – Eine befestigte Höhensiedlung (Grabung 1965–1990). Die latènezeitlichen Siedlungsfunde*. Mitteilungen der Prähistorischen Kommission 61. Wien 2006.
- Karwowski 2012 M. Karwowski: Gars – Thunau am Kamp. In: *Sievers/Urban/Ramsl 2012*, 612.
- Karwowski/Czubak 2019 M. Karwowski/J. M. Czubak: Das latènezeitliche Gräberfeld von Göttlesbrunn, Flur Geitzbilln (VF 07–08). In: F. Pieler/P. Trebsche (Hrsg.): *Beiträge zum Tag der Niederösterreichischen Landesarchäologie 2019*. Asparn/Zaya 2019, 71–78.
- Kern 2012 A. Kern: Roseldorf. In: *Sievers/Urban/Ramsl 2012*, 1609–1610.
- Kern/Karwowski/Militký 2012 A. Kern/M. Karwowski/J. Militký: Oberleis, Österreich. In: *Sievers/Urban/Ramsl 2012*, 1399–1402.

- Kern et al. 2009 A. Kern/K. Kowarik/A. W. Rausch/H. Reschreiter (Hrsg.): *Kingdom of Salt. 7000 years of Hallstatt*. Vienna 2009.
- Kimmel/Aronson 2004 M. S. Kimmel/A. Aronson (Hrsg.): *Men and Masculinity*. St. Barbara 2004.
- Kinsella 2002 Th. Kinsella: *The Táin. Translated from the Irish Epic Tain Bo Cuailnge*. Oxford 2002.
- Kistler/Ulf 2012 E. Kistler/Chr. Ulf: Kulturelle Akteurinnen und Akteure. Die emische Konstruktion von Kultur und ihre Folgen. In: Chr. Ulf/E.-M. Hochhauser (Hrsg.): *Kulturelle Akteure. Cultural Encounters and Transfers 1*. Würzburg 2012, 21–69.
- Knapp 1998a A. B. Knapp: Who's come a long way, baby? Masculinist approaches to a gendered archaeology. *Archaeological Dialogues* 5, 1998, 91–125.
- Knapp 1998b A. B. Knapp: Boys will be Boys. Masculinist approaches to a gendered archaeology. In: K. Hays-Gilpin/D. S. Whitley (Ed.): *Reader in Gender Archaeology*. London 1998, 365–373.
- Knappett 2013 C. Knappett: Introduction: Why Networks? In: C. Knappett (Ed.): *Network analysis in Archaeology. New Approaches to Regional Interaction*. Oxford 2013, 3–15.
- Kossina 1911 G. Kossina: *Die Herkunft der Germanen*. Zur Methode der Siedlungsarchäologie. Mannus Bibliothek 6. Würzburg 1911.
- Kovár 2007 B. Kovár: Nepublikované laténske hrobové nálezy z Pohronia. *Zborník SNM* 101 – *Archeológia* 17, 2007, 87–96.
- Krämer 1964 W. Krämer: *Das keltische Gräberfeld von Nebringen (Kreis Böblingen)*. Veröffentlichungen des staatlichen Amtes für Denkmalpflege Stuttgart, Reihe A, Heft 8. Stuttgart 1964, 7–42.
- Križ 2005 B. Križ: *Novo mesto. Kapitelska njiva. Mlajše železnodobno grobišče*. Late Iron Age cemetery 6. Novo Mesto 2005.
- Lamnek 2002 S. Lamnek: Status. In: G. Endruweit/G. Trommdorf (Hrsg.): *Wörterbuch der Soziologie*. Stuttgart 2002, 575–576.
- Landolt 2009 S. Landolt: „Männer besaufen sich, Frauen nicht“: Geschlechterkonstruktionen in Erzählungen Jugendlicher über Alkoholkonsum. In: Chr. Binswanger/M. Bridges/B. Schnegg/D. Wastl-Walter: *Gender Scripts. Widerspenstige Anagnungen von Geschlechternormen (Politik der Geschlechterverhältnisse)*. Frankfurt am Main – New York 2009, 243–264.
- Lederer 1980 H. Lederer: Steinebrunn. *Fundberichte aus Österreich* 19, 1980, 460.
- Leonhard 1909 G. Leonhard, Familia. In: G. Wyssova (Hrsg.): *Paulys Realencyclopädie der Classischen Altertumswissenschaft, Zwölfter Halbband*. Stuttgart 1909, 1980–1982.
- Levínský 2009 O. Levínský: Mlčechvosty (okr. Mělník) – polykulturní sídliště a pohřebiště z období mladšího pravěku a středověku (novověku). *Výzkum v roce 2005. Archeologie ve středních Čechách* 13, 2005, 305–322.
- Liebsch 2000 K. Liebsch: Identität und Habitus. In: H. Korte/B. Schäfers: *Einführung in Hauptbegriffe der Soziologie*. 5. erweiterte und aktualisierte Auflage. Opladen 2000, 65–82.
- Lipp 1986 W. Lipp: Geschlechtsrollenwechsel. *Kölner Zeitschrift für Psychologie und Sozialpsychologie* 38, 1986, 529–559.
- Lucy 2005 S. Lucy: The archaeology of age. In: M. Diaz-Andreu/S. Lucy/S. Babić/D. Edwards (Ed.): *The Archaeology of Identity: Approaches to Gender, Age, Status, Ethnicity and Religion*. London 2005, 43–66.
- Ludikovský 1970 K. Ludikovský: Bohatý hrob ženy z keltského pohřebiště v Blučině, o. Brno-venkov. *Památky archeologické* 61, 519–535.
- Ludikovský 1971 K. Ludikovský: Laténské sídliště v Chrlicích (okr. Brno-venkov). *Přehled výzkumů* 1970, 38f.
- Ludikovský 1975 K. Ludikovský: Laténský kostrový hrob v Bučovicích. *Přehled výzkumů* 1975, 37–38.
- Martin-Kilcher 1981 S. Martin-Kilcher: Das keltische Gräberfeld von *Vevey* VD. *Jahrbuch der Schweizerischen Gesellschaft für Urgeschichte* 64, 1981, 105–156.
- Mattingly 1992 D. J. Mattingly: War and Peace in Roman North Africa. In: R. B. Ferguson/N. L. Whitehead: *War in the Tribal Zone*. Santa Fe – Oxford 1992, 31–60.
- Maurer 1976 H. Maurer: Latènezeitliche Hallstattkultur im pol. Bezirk Horn, NÖ. *Fundberichte aus Österreich* 15, 1976, 91–113.

- Mayor 2016 A. Mayor: *Warrior Women. The Myth and Reality of the Amazons*. Foreign Affairs. Stanford 2016.
- Meduna 1961 J. Meduna: Zachraňovací výzkum v Brně-Horních Heršpicích. *Přehled výzkumů* 1960, 73.
- Meduna 1962a J. Meduna: Laténské žárové hroby na Moravě. *Památky archeologické* 53, 87–136.
- Meduna 1962b J. Meduna: Laténské pohřebiště v Pustiměřských Prusích. *Sborník Československé Společnosti Archeologické při ČSAV Brno 2*, 1962, 167–192.
- Meduna 1970 J. Meduna: Laténské pohřebiště v Brně-Horních Heršpicích. *Památky archeologické* 61, 225, 235.
- Meduna 1980a J. Meduna: *Die latènezeitlichen Siedlungen und Gräberfelder in Mähren (Katalog)*. Fontes Archaeologicae Moravicae XI. Brno 1980.
- Meduna 1980b J. Meduna: *Die latènezeitlichen Siedlungen in Mähren*. Praha 1980
- Meduna/Peškař 1992 J. Meduna/I. Peškař: Ein latènezeitlicher Fund mit Bronzebeschlägen von Brno-Maloměřice (Kr. Brno-Stadt). *Berichte Römisch-Germanischen Kommission* 73, 1992, 182–267.
- Megaw/Megaw/Neugebauer 1989 J. V. S. Megaw/M. R. Megaw/J.-W. Neugebauer: Zeugnisse frühlatènezeitlichen Kunsthandwerks aus dem Raum Herzogenburg, Niederösterreich. *Germania* 67, 1989, 477–517.
- Melzer 1984 G. Melzer: KG Mannersdorf am Leithagebirge, MG Mannersdorf am Leithagebirge, VB Bruck an der Leitha. *Fundberichte aus Österreich* 23, 1984, 241.
- Meuser 2002 M. Meuser: „Doing Masculinity“ – Zur Geschlechtslogik männlichen Gewalthandelns. In: R.-M. Dackweiler/R. Schäfer (Hrsg.): *Gewalt-Verhältnisse. Feministische Perspektiven auf Geschlecht und Gewalt*. Frankfurt am Main 2002, 53–78.
- Meuser 2016 M. Meuser: „Involved Fatherhood: Source of New Gender Conflicts?“ In: I. Crespi/E. Ruspini (Ed.): *Balancing Work and Family in a Changing Society*. New York 2016.
- Moore 2011 T. Moore: Detribalizing the later prehistoric past. Concepts of tribes in Iron Age and Roman studies. *Journal of Social Archaeology* 11/3, 2011, 334–360.
- Morris 1987 I. Morris: *Burial and Ancient Society. The Rise of the Greek City-State*. Cambridge 1987.
- Müllauer/Ramsl 2007 N. Müllauer/P. C. Ramsl: Herstellungstechnische Untersuchungen zu den Hohlblechreifen aus dem latènezeitlichen Gräberfeld von Mannersdorf/Lgb. *Archäologisches Korrespondenzblatt* 2007/1, 2007, 67–84.
- Müller-Scheeßel 2011 N. Müller-Scheeßel: Wirklich nur Jagen, Kämpfen, Saufen? Die Konstruktion von Männlichkeit in ur- und frühgeschichtlichen Gesellschaften. *Altertum* 56, 2011, 205–222.
- Naumann 1915 F. Naumann: *Mitteleuropa*. Berlin 1915.
- Nebehay 1971 St. Nebehay: Das latènezeitliche Gräberfeld von der Flur Mühlbachhäcker bei Au a. L., p. B. Bruck a. d. Leitha, NÖ. *Archaeologia Austriaca* 50, 1971, 138–175.
- Nebehay 1973 St. Nebehay: *Das latènezeitliche Gräberfeld von der Kleinen Hutweide bei Au a. L., p. B. Bruck a. d. Leitha, NÖ*. *Archaeologia Austriaca*, Beih. 11, Wien 1973.
- Nebehay 1976 St. Nebehay: *Beiträge zur Erforschung der frühen und mittleren Latènezeit in Niederösterreich*. Dissertation. Wien 1976.
- Nebehay 1977 St. Nebehay: La Tène in Eastern Austria. M. Guštin (Ed.): *Keltske studije. Posavski muzej Brežice* 4, 1977, 51–58.
- Nebehay 1993 St. Nebehay: *Latènegräber in Niederösterreich*. Kleine Schriften aus dem Vorgeschichtlichen Seminar Marburg 41. Marburg 1993.
- Neugebauer 1981 J.-W. Neugebauer: *Herzogenburg-Kalkofen, ein ur- und frühgeschichtlicher Fundplatz im unteren Traisental*. Fundberichte aus Österreich, Materialheft 1. Wien 1981.
- Neugebauer 1988 J.-W. Neugebauer: Neuere Forschungsergebnisse auf dem Gebiet der Hallstattkultur in Nordniederösterreich. *Archäologie Alpen Adria* 1, 1988, 85–108.
- Neugebauer 1991a J.-W. Neugebauer: The Cemetery near St. Pölten. In: Katalog „*The Celts*“. Venedig 1991, 296, 297.

- Neugebauer 1991b J.-W. Neugebauer: The Mannersdorf Cemetery. In: Katalog "The Celts". Venedig 1991, 298, 299.
- Neugebauer 1992 J.-W. Neugebauer: *Die Kelten im Osten Österreichs*. Wissenschaftliche Schriftenreihe Niederösterreich 92–94. St. Pölten – Wien 1992.
- Neugebauer 1993 J.-W. Neugebauer: *Archäologie in Niederösterreich. St. Pölten und das Traisental*. St. Pölten – Wien 1993.
- Neugebauer 1994 J.-W. Neugebauer: Rettungsgrabungen im Unteren Traisental im Jahre 1994. *Fundberichte aus Österreich* 33, 1994, 297–342.
- Neugebauer 1996 J.-W. Neugebauer: Eine frühlatènezeitliche Gräbergruppe in Inzersdorf ob der Traisen. In: E. Jerem/A. Krenn-Leeb/J.-W. Neugebauer/O. H. Urban: *Die Kelten in den Alpen und an der Donau*. Budapest – Wien 1996, 111–178.
- Neugebauer 1997 J.-W. Neugebauer: Rettungsgrabungen im Unteren Traisental in den Jahren 1996 und 1997. *Fundberichte aus Österreich* 36, 1997, 451–632.
- Neugebauer 1999 J.-W. Neugebauer: Rettungsgrabungen im Unteren Traisental in den Jahren 1998 und 1999. *Fundberichte aus Österreich* 38, 1999, 483–592.
- Neugebauer/Gattringer 1982 J.-W. Neugebauer/A. Gattringer: Die Kremser Schnellstraße S 33. Zweiter Vorbericht über die Ergebnisse der archäologischen Überwachung des Großbauvorhabens durch die Abt. f. Bodendenkmale des Bundesdenkmalamtes im Jahre 1982. *Fundberichte aus Österreich* 21, 1982, 66–67.
- Neugebauer/Gattringer 1984 J.-W. Neugebauer/A. Gattringer: Rettungsgrabungen im Unteren Traisental im Jahr 1984. Vierter Vorbericht über Aktivitäten der Abt. f. Bodendenkmale des Bundesdenkmalamtes nach der Verkehrsfreigabe der Kremser Schnellstraße S 33. *Fundberichte aus Österreich* 23, 1984, 97–142.
- Neugebauer/Gattringer 1985/86 J.-W. Neugebauer/A. Gattringer: Rettungsgrabungen im Unteren Traisental in den Jahren 1985/86. Fünfter Vorbericht über die Aktivitäten der Abt. f. Bodendenkmale des Bundesdenkmalamtes im Raum St. Pölten – Traismauer. *Fundberichte aus Österreich* 24–25, 1985/86, 71–106.
- Neugebauer/Neugebauer 1981 J.-W. Neugebauer/Chr. Neugebauer: Urnenfelderzeitliche Ansiedlung und latènezeitliche Grabenanlage in Zöfing, Gem. Judenau-Baumgarten, NÖ. *Fundberichte aus Österreich* 20, 1981, 115–156.
- Neugebauer/Ramsl 1998 J.-W. Neugebauer/P. C. Ramsl: Die frühlatènezeitliche, birituelle Nekropole von Pottenbrunn, Landeshauptstadt St. Pölten. Niederösterreich. *Schriften des Bernischen Historischen Museums* 2, 1998, 255–264.
- Neugebauer et al. 1991 J.-W. Neugebauer/A. Gattringer/Chr. Blesl/Chr. Neugebauer-Maresch/B. Sitzwohl: Rettungsgrabungen im Unteren Traisental im Jahre 1991 (mit Ausblick auf 1992). Zehnter Vorbericht über die Aktivitäten der Abt. f. Bodendenkmale des Bundesdenkmalamtes im Raum St. Pölten-Traismauer. *Fundberichte aus Österreich* 30, 87–140.
- Neugebauer et al. 1993 J.-W. Neugebauer et al.: Rettungsgrabungen im Unteren Traisental in den Jahren 1992 und 1993. *Fundberichte aus Österreich* 32, 1993, 443–512.
- NG 1 Die Gender-Revolution. In: *Ein Heft rund um Gender*. National Geographic Deutschland. Januar 2017, 22–26.
- Nordberg 2015 J. Nordberg: *Afghanistans verborgene Töchter. Wenn Mädchen als Söhne aufwachsen*. Hamburg 2015.
- Novotny in prep. F. Novotny: *Die Kelten im Traisental. Anthropologische Untersuchung verschiedener latènezeitlicher Populationen im selben Lebensraum*.
- Pany 2005 D. Pany: "Working in a saltmine..." – Erste Ergebnisse der anthropologischen Auswertung von Muskelmarken an den menschlichen Skeletten aus dem Gräberfeld Hallstatt. In: R. Karl/J. Leskovar (Hrsg.): *Interpretierte Eisenzeiten*. Linz 2005, 101–111.
- Pany-Kucera/Reschreiter/Kern 2010 D. Pany-Kucera/H. Reschreiter/A. Kern: Auf den Kopf gestellt? Überlegungen zu Kinderarbeit und Transport im prähistorischen Salzbergwerk Hallstatt. *Mitteilungen Anthropologische Gesellschaft Wien* 140, 2010, 39–68.
- Paulík/Zachar 1975 J. Paulík/L. Zachar: Kultový objekt a hroby z doby laténskej v Palárikove. *Slovenská archeológia* 23, 1975, 283–340.
- Pauli 1975 L. Pauli: *Keltischer Volksglaube*. Münchner Beiträge zur Vor- und Frühgeschichte 28, 1975.
- Pittioni 1930 R. Pittioni: *La Tène in Niederösterreich*. Materialien zur Urgeschichte Österreichs 5. Wien 1930.

- Pittioni 1941 R. Pittioni: *Beiträge zur Urgeschichte der Landschaft Burgenland im Reichsgau Niederdonau*. Wien 1941.
- Pockels 1808 C. F. Pockels: *Der Mann: ein anthropologisches Charaktergemälde seines Geschlechts: ein Gegenstück zu der Charakteristik des weiblichen Geschlechts*, Band 4. Hannover 1808.
- Pohl 1998 W. Pohl: Telling the difference – Signs of ethnic identity. In: W. Pohl/H. Reimitz (Hrsg.): *Strategies of Distinction. The construction of Ethnic Communities*. Leiden – New York – Köln 1998, 17–69.
- Pohl 2002 W. Pohl: Ethnicity, Theory, and Tradition. A Response. In: A. Gillett (Ed.): *Critical Approaches to Ethnicity in the Early Middle Ages*. Turnhout 2002, 221–240.
- Pohl 2018 W. Pohl: Von der Ethnogenese zur Identitätsforschung. In: W. Pohl/M. Diesenberger/B. Zeller (Hrsg.): *Neue Wege der Frühmittelalterforschung. Bilanz und Perspektiven*. Wien 2018.
- Pohl/Mehofer 2010 W. Pohl/M. Mehofer (Hrsg.): *Archaeology of Identity*. Archäologie der Identität. Forschungen zur Geschichte des Mittelalters, Band 17. Wien 2010.
- Polenz 1982 H. Polenz: Münzen in latènezeitlichen Gräbern Mitteleuropas aus der Zeit zwischen 300 und 50 vor Christi Geburt. *Bayerische Vorgeschichtsblätter* 47, 1982, 27–222.
- Poulik, s.d. J. Poulik: Das keltische Gräberfeld von Brünn-Malmeritz. *Zeitschrift Mährisches Landesmuseum (N. F.)* 2, s.d., 49–86.
- Preinfalk 2003 F. Preinfalk: *Poysdorf. Fundberichte aus Österreich* 42, 2003, 27.
- Preinfalk 2005 F. Preinfalk: Grabhügeln am Ufer der Perschling. *Fundberichte aus Österreich* 2, 2005, 90–97.
- Preinfalk/Preinfalk 2014 A. Preinfalk/F. Preinfalk: Ein reich ausgestattetes Kriegergrab der Latènezeit aus Gemeinlebarn. In: E. Lauermaun/P. Trebsche (Hrsg.): *Beiträge zum Tag der Niederösterreichischen Landesarchäologie*. Asparn/Zaya 2014, 42–49.
- Procházka 1909 A. Procházka: Z praehistorie Vyškovska a okolí. *Pravěk* 5, 1909, 186–172.
- Procházka 1937 A. Procházka: *Gallská pohřebiště na Vyškovsku*. Slavkov u Brna 1937.
- Putna 2011 M. C. Putna: *Homosexualita v dějinách české kultury*. Praha 2011.
- Pülz/Trinkl 2015 A. Pülz/E. Trinkl (Hrsg.): *Das Eigene und das Fremde*, Akten der 4. Tagung des Zentrums Archäologie und Altertumswissenschaften an der ÖAW. Wien 2015.
- Pynsent 1994 R. B. Pynsent: *Questions of Identity. Czech and Slovak Ideas of Nationality and Personal identity*. New York 1994.
- Ramsl 1998 P. C. Ramsl: *Inzersdorf-Walperdorf. Studien zur späthallstatt-/latènezeitlichen Besiedlung im Traisental, Niederösterreich*. Fundberichte aus Österreich. Materialheft A6. Horn 1998.
- Ramsl 2002a P. C. Ramsl: *Das eisenzeitliche Gräberfeld von Pottenbrunn, SG St. Pölten. Niederösterreich. Forschungsansätze zu wirtschaftlichen Grundlagen und sozialen Strukturen der latènezeitlichen Einwohner des Traisentales*. Fundberichte aus Österreich. Materialheft A11. Horn 2002.
- Ramsl 2002b P. C. Ramsl: Die keltischen Gräberfelder von Pottenbrunn und Mannersdorf/Lgb. Zwei Drehscheiben zwischen West und Ost. *Archäologie Österreichs* 13/2, 2002, 6–23.
- Ramsl 2006 P. C. Ramsl: Katalogbeitrag (Inventar eines Kriegergrabes aus der Zivilstadt Carnuntum). In: F. Humer: *Legionsadler und Druidenstab. Vom Legionslager zur Donaumetropole*. Katalogband, 2006, 54–55.
- Ramsl 2008 P. C. Ramsl: Der „Druide“ aus Grab 520 aus dem eisenzeitlichen Gräberfeld von Pottenbrunn, (Niederösterreich). In: E. Lauermaun/P. Trebsche (Hrsg.): *Heiligtümer der Druiden, Opfer und Rituale bei den Kelten*. Katalog des Niederösterreichischen Landemuseums. Neue Folge 747. Asparn/Zaya 2008, 160–167.
- Ramsl 2009 P. C. Ramsl: Eine Omeganadel im latènezeitlichen Gräberfeld von Mannersdorf am Leithagebirge, Niederösterreich. In: G. Tiefengraber/B. Kavur/A. Gaspari (Ed.): *Keltske studije II [Papers in honour of Mitja Guštin]*. *Studies in Celtic Archaeology*. Ljubljana 2009, 117–124.

- Ramsl 2011 P. C. Ramsl: *Das latènezeitliche Gräberfeld von Mannersdorf am Leithagebirge, Flur Reinthal Süd, Niederösterreich*. Mitteilungen der Prähistorischen Kommission 74, Wien 2011.
- Ramsl 2012a P. C. Ramsl: Traisental. In: *Sievers/Urban/Ramsl 2012*, 1855–1857.
- Ramsl 2012b P. C. Ramsl: Oberndorf in der Ebene. In: *Sievers/Urban/Ramsl 2012*, 1402–1403.
- Ramsl 2012c P. C. Ramsl: Gemeinlebarn. In: *Sievers/Urban/Ramsl 2012*, 622–623.
- Ramsl 2012d P. C. Ramsl: Inzersdorf-Walpersdorf. In: *Sievers/Urban/Ramsl 2012*, 832–834.
- Ramsl 2012e P. C. Ramsl: Getzersdorf. In: *Sievers/Urban/Ramsl 2012*, 635.
- Ramsl 2012f P. C. Ramsl: Franzhausen. In: *Sievers/Urban/Ramsl 2012*, 566, 567.
- Ramsl 2012g P. C. Ramsl: Pottenbrunn. In: *Sievers/Urban/Ramsl 2012*, 1522–1524.
- Ramsl 2012h P. C. Ramsl: Loretto. In: *Sievers/Urban/Ramsl 2012*, 1197, 1198.
- Ramsl 2012i P. C. Ramsl: Au. In: *Sievers/Urban/Ramsl 2012*, 90, 91.
- Ramsl 2012j P. C. Ramsl: Late Iron Age Burial Rites in Eastern Austria. S. Berecki (Ed.): *Iron Age Rites and Rituals in the Carpathian basin*. Proceedings of the International Colloquium from Târgu Mureş 2011. Târgu Mureş 2012, 183–188.
- Ramsl 2014a P. C. Ramsl: La Tène Period Craftsmanship in Eastern Austria. In: S. Berecki (Ed.): *Iron Age Crafts and Craftsmen in the Carpathian Basin*. Proceedings of the International Colloquium from Târgu Mureş 2013. Târgu Mureş 2014, 71–77.
- Ramsl 2014b P. C. Ramsl: Age Identities in Central Europe – Some Initial Approaches. In: C. Popa/S. Stoddart (Ed.): *Fingerprinting the Iron Age*. Cambridge 2014, 200–208.
- Ramsl 2015 P. C. Ramsl: Mobilität, Migration und Identität – latènezeitliche Gräberfelder in Nordostösterreich. In: A. Pülz/E. Trinkl (Ed.): *Das Eigene und das Fremde, Origines*. Schriften des Zentrums Archäologie und Altertumswissenschaften 4. Wien 2015, 65–72.
- Ramsl 2016 P. C. Ramsl: Latènezeitliche Gräber in Petronell-Carnuntum. Krieger, bewaffnete Männer oder einfach Rollenbilder einer Gesellschaft? In: E. Lauer mann/P. Trebsche (Hrsg.): *Beiträge zum Tag der Niederösterreichischen Landesarchäologie*. Katalog des Niederösterreichischen Landesmuseums. Asparn/Zaya 2016, 12–19.
- Ramsl 2018a P. C. Ramsl: Interregional relations and connections in Central Europe's Iron Age. In: S. Berecki (Ed.): *Iron Age Connectivity in the Carpathian Basin*. Proceedings of the International Colloquium from Târgu Mureş 2017. Târgu Mureş 2018, 39–50.
- Ramsl 2018b P. C. Ramsl: *Ein Beitrag zur Frage des Übergangs von der Hallstatt- zur Frühlatènezeit in Nordostösterreich*. Annalen Naturhist. Museum Wien, Serie A. Wien 2018, 493–502.
- Ramsl, in prep. P. C. Ramsl: *Die latènezeitlichen Gräberfelder von Ossarn und Oberndorf, Niederösterreich* (in prep.).
- Ramsl/Roncador 2019 P. C. Ramsl/R. Roncador: Über die Stellung der Gräber mit „alpiner Keramik“ und anderen inneralpinen Artefakten in Mannersdorf am Leithagebirge, Flur Reinthal Süd. In: S. Heye/U. Töchterle (Hrsg.): *UPIKU: TAUKE. Festschrift für Gerhard Tomedi zu seinem 65. Geburtstag*. Universitätsforschungen zur prähistorischen Archäologie. Bonn 2019, 489–502.
- Ratimorská 1981 P. Ratimorská: Keltské pohrebisko v Chotíne I. *Západné Slovensko* 8, Komárno 1981, 15–88.
- Rehbein 2006 B. Rehbein: *Die Soziologie Pierre Bourdieus*. Konstanz 2006.
- Rejholcová 1977 M. Rejholcová: Ďalšie keltské pohrebisko v Hurbanove-Bohatej (Ein weiteres keltisches Gräberfeld in Hurbanovo-Bohatá). *Slovenská archeológia* 25, 1977, 47–68.
- Renhart 1990 S. Renhart: *Zur Anthropologie der frühlatènezeitlichen Bevölkerung Ostösterreichs*. Dissertation. Wien 1990.
- Renhart 1996 S. Renhart: *Zur Anthropologie der Kelten. Die frühlatènezeitlichen Gräberfelder von Inzersdorf, Ossarn, Herzogenburg-Süd und Franzhausen (NÖ)*. In: E. Jerem/A. Krenn-Leeb/J.-W. Neugebauer/O. H. Urban (Hrsg.): *Die Kelten in den Alpen und an der Donau*. Akten des Internationalen Symposiums St. Pölten. Budapest – Wien 1996, 179–192.

- Rolle 1989
R. Rolle: *The world of the Skythians*. London 1989.
- Romsauer 1999
P. Romsauer: Zur Frage der Westgrenze der Mezőcsát-Gruppe. In: *Archaeology of the Bronze and Iron Age. Experimental Archaeology. Environmental Archaeology. Archaeological Parks*. Proceedings of the International Conference Százhalombatta 1996. Budapest 1999, 167–176.
- Roymans 1990
N. Roymans: *Tribal Societies in Northern Gaul. An Anthropological Perspective*. Amsterdam 1990.
- Ruß 2004
D. Ruß: Ein mehrphasiger Siedlungs- und Bestattungsplatz auf der Trasse der Ortsumfahrung Jetzelsdorf (B 303), Niederösterreich. *Fundberichte aus Österreich* 43, 2004, 752–774.
- Ruß/Wiltschke-Schrotta 2008
D. Ruß/K. Wiltschke-Schrotta: Ein Grab der Latènezeit mit Würfel- und Spielsteinbeigabe aus Peigarten (Niederösterreich). In: E. Lauer mann/P. Trebsche (Hrsg.): *Heiligtümer der Druiden. Opfer und Rituale bei den Kelten. Aktuelle Forschungsbeiträge zur Sonderausstellung im Museum für Urgeschichte des Landes Niederösterreich in Asparn/Zaya vom 23. April bis 30. November 2008*. Katalog des Niederösterreichischen Landesmuseums. Neue Folge 474, Asparn an der Zaya 2008, 168–175.
- Ruske 2012
A. Ruske: Boudicca. In: *Sievers/Urban/Ramsl 2012*, 217.
- Ruspini et al. 2011
E. Ruspini/J. Hearn/B. Pease/K. Pringle (Ed.): *Men and Masculinities around the World. Transforming Men's Practices*. New York 2011.
- Rustoiu 2013
A. Rustoiu: Double costumes in female burials from the Carpathian basin. In: J. V. Ferencz/N. C. Rîșcuța/O. T. Bărbat (Ed.): *Archaeological small finds and their significance*. Proceedings of the symposium: Costumes as an identity expression. Cluj-Napoca 2013, 89–100.
- Sankot 2014
P. Sankot: Laténsky hrob 67/2005 v Mlčechvostech, okr. Mělník – s pohřbem amazonky z oblasti Lotrinska ve středních Čechách? La Tène period grave 67/2005 from Mlčechvosty (Distr. of Mělník) – with one armed amazon from Lorraine region in Central Bohemia? *Praehistorica* 32/2, 2014, 285–294.
- Sauer 2007
F. Sauer: *Die archäologischen Grabungen auf der Trasse der A6. Fundstellen Potz-neusiedl. Wangheim* 2007.
- Scheibelhofer 2018
P. Scheibelhofer: *Der fremd-gemachte Mann. Zur Konstruktion von Männlichkeiten im Migrationskontext*. Wiesbaden 2018.
- Schuhmann 2015
R. Schuhmann: *Status und Prestige in der Hallstattkultur*. Münchner Archäologische Forschungen 3, 2015.
- Seidl 2012
J. Seidl: *Od žaláře k oltáři – emancipace homosexuality v českých zemích od roku 1867 do současnosti*. Brno 2012.
- Segal 1990
L. Segal: *Slow motion. Changing masculinities, changing men*. London 1990.
- Seracin/Zehenthofer 1916
A. v. Seracin/M. Zehenthofer: Das Gräberfeld von Mannersdorf am Leithagebirge. *Wiener Prähistorische Zeitschrift* 3, 1916, 71–84.
- Sievers/Urban/Ramsl 2012
S. Sievers/O. H. Urban/P. C. Ramsl (Hrsg.): *Lexikon zur keltischen Archäologie*. Mitteilungen der Prähistorische Kommission 73. Österreichische Akademie der Wissenschaften. Wien 2012.
- Skutil 1941
J. Skutil: Moravské prehistorické výzkumy a nálezy. Oddlení moravského pravěku Zemského musea 1933–1936. *Zeitschrift des Mährischen Landesmuseums (N. F.)* 1, 1941, 139–195.
- Sorensen 1992
M. L. Sørensen: *Gender archaeology and Scandinavian Bronze Age studies*. Norwegian Archaeological Review 25/1, 1992, 31–49.
- Stift-Gottlieb 1935
A. Stift-Gottlieb: Mittel-latènezeitliche Gräber aus Klein-Reinprechtsdorf bei Eggenburg, pol. Bez. Horn, NÖ. *Mitteilungen der Anthropologischen Gesellschaft Wien* 65, 1935, 169–181.
- Stöcker 2019
Chr. Stöcker: *Männer sind an allem Schuld*. Spiegel online. <http://spon.de/afo2s> [27. 03. 2019].
- Stránská/Hájek 2009
P. Stránská/M. Hájek: Laténské kostrové pozůstatky z Mlčechvost – La Tène Period skeletal remains from Mlčechvosty. *Archeologie ve středních Čechách* 13, 2009, 323–325.
- Styk 2019
M. Styk: Problematika funkcie keramických prídavkov v hrobovom inventári. In: L. Benediková/G. Březinová/K. Pieta (Ed.): *Abstract Book. Kelti/The Celts/Die Kelten 2019*. 20th International Conference – The La Tène Period in Central Europe, Stará Lesná 14th–17th. 5. 2019. Nitra 2019, 29–30.

- Szabó/Petres 1992 M. Szabó/E. Petres: *Decorated Weapons of the la Tène Iron Age in the Carpathian Basin*. Inventaria Praehistorica Hungariae 5. Budapest 1992.
- Tankó/Tankó 2012 É. Tankó/K. Tankó: Cremation and Deposition in the Late Iron Age Cemetery at Ludas. In: S. Berecki (Ed.): *Iron Age Rites and Rituals in the Carpathian Basin*. Proceedings of the International Colloquium from Targu Mures, 7–9 October 2011. Targu Mureş 2012, 29–258.
- Tanner 1994 J. Tanner: *The falcon: A narrative of the captivity and adventures of John Tanner*. New York 1994.
- Taylor 2006 T. Taylor: The Origins of Human Sexual Culture: Sex, Gender and Social Control. *Journal of Psychology and Human Sexuality* 18/2–3, 2006, 69–105.
- Theweileits 1996 K. Theweileits: *Männerphantasien*. Berlin 1996.
- Thurzo 1975 M. Thurzo: Anthropologische Analyse der Skelettreste aus dem Fundort Palárikovo II (Hügelgrab). *Slovenská archeológia* 23, 1975, 337.
- Točík 1959 A. Točík: Kotázke osídlenia juhozápadného Slovenska na zlome letopočtu (Zur Frage der Besiedlung der Südwestslowakei zu Ende der alten Zeitrechnung). *Archeologické rozhledy* 11, 1959, 841–874.
- Točík 1964 A. Točík: Záchranný výskum v Bajči-Vlkanove v rokoch 1959–1960 (Rettungsgrabung von Bajč-Vlkanovo in den Jahren 1959–1960). *Študijné zvesti AU SAV* 12, 1964, 5–186.
- Točík 1978 A. Točík: Prieskum archeologických lokalít v Bajči (Begehung der archäologischen Fundstellen in Bajč). *Archeologické výskumy a nálezy na Slovensku v roku 1977*, Nitra 1978, 237–246.
- Tóth 2015 G. Tóth: Report on the Anthropological Examination of the La Tène Age biritual Cemetery in Héteny (Chotín). Abstract. *Eruditio – Educatio* 10/1, 2015, 113–120.
- Tramblay Cormier/Nakoinz/Popa 2017 L. Tramblay Cormier/O. Nakoinz/C. N. Popa: Three Methods for Detecting Past Groupings. Cultural Space and Group Identity. *Journal of Archaeological Method and Theory* 2017, 1–19.
- Trebsche/Fichtl 2018 P. Trebsche/St. Fichtl: Im Zentrum der latènezeitlichen Siedlung von Haselbach. Ergebnisse der französisch-österreichischen Ausgrabungen 2017. In: F. Pieler/P. Trebsche (Hrsg.): *Beiträge zum Tag der Niederösterreichischen Landesarchäologie 2018*. Asparn/Zaya 2018, 68–82.
- Treggiari 1991 S. Treggiari: *Roman Marriage. Iusti Coniuges from the time of Cicero to the Time of Ulpian*. Oxford – New York 1991.
- Troniček 1959 Chr. Troniček: *Bericht über die menschlichen Skelette aus dem latènezeitlichen Gräberfeld von Bajč*. Praha 1959.
- Urban 1995 O. H. Urban: *Keltische Höhensiedlungen an der mittleren Donau vom Linzer Becken bis zur Porta Hungarica 2. Der Braunsberg*. Linzer Archäologische Forschungen 23. Linz 1995.
- Urban 2012a O. H. Urban: Kuffern. In: *Sievers/Urban/Ramsl* 2012, 974–975.
- Urban 2012b O. H. Urban: Ossarn. In: *Sievers/Urban/Ramsl* 2012, 1427–1428.
- Urban 2012c O. H. Urban: Herzogenburg. In: *Sievers/Urban/Ramsl* 2012, 760–761.
- Urban 2012d O. H. Urban: Inzersdorf. In: *Sievers/Urban/Ramsl* 2012, 832.
- Urban 2012e O. H. Urban: Reichersdorf. In: *Sievers/Urban/Ramsl* 2012, 1569.
- Urban 2012f O. H. Urban: Freinberg. In: *Sievers/Urban/Ramsl* 2012, 570.
- Urban/Cech 1999 O. H. Urban/B. Cech: *Der Leopoldsberg. Archäologische Forschungen auf dem Wiener Hausberg (mit mehreren Beiträgen)*. Wiener Archäologische Studien. Forschungsgesellschaft Wiener Stadtarchäologie. Wien 1999.
- Urban/Ruprechtsberger 2003 O. H. Urban/E. M. Ruprechtsberger: Le site fortifié du Gründberg. In: *Forgers et Ferrailleurs, fer et savoir-faire à l'époque celtique*, Bibracte. Musée de la civilisation celtique. Glux-en-Glenne 2003, 16–18.
- Urban/Teschler-Nicola/Schultz 1985 O. H. Urban/M. Teschler-Nicola/ M. Schultz: Die latènezeitlichen Gräberfelder von Katzelsdorf und Guntramsdorf, Niederösterreich. Ein Beitrag zur Trepanation bei den Kelten. *Archaeologia Austriaca* 69, 1985, 13–104.
- Urwin 2017 J. Urwin: *Boys don't cry. Identität. Gefühl und Männlichkeit*. Hamburg 2017.
- van Gennep 1999 A. van Gennep: *Übergangsriten (Les rites de passage)*. Frankfurt am Main – New York 1999.

- van Dyk 2015
Voss/Schmidt 2000
- Vasić 1982
- Veit 2008
- Waldhauser 1978
- Weber [1920] 1958
Weidig 2014
- Wenskus 1961
- Whitehead 1992
- Willvonseder 1932
- Wolfram 2009
- Zeiler et al. 2010
- Zeller 2003
- Zöllner 1950
- S. van Dyk: *Soziologie des Alters*. Bielefeld 2015.
- B. L. Voss/R. A. Schmidt: *Archaeologies of Sexuality. An Introduction*. In: R. A. Schmidt/B. L. Voss (Ed.): *Archaeologies of Sexuality*. Routledge. London 2000, 1–32.
- R. Vasić: Ein Beitrag zu den Doppelnadeln im Balkanraum. *Prähistorische Zeitschrift* 57, 1982, 221–257.
- U. Veit: Zur Einführung. In: Ch. Kümmel/B. Schweizer/U. Veit (Hrsg.): *Körperinszenierung – Objektsammlung – Monumentalisierung. Totenritual und Grabkult in frühen Gesellschaften. Archäologische Quellen in kulturwissenschaftlicher Perspektive. Tübinger Archäologische Taschenbücher* 6, 2008, 17–32.
- J. Waldhauser: *Das keltische Gräberfeld bei Jenišův Újezd in Böhmen*. I–II. Teplice 1978.
- M. Weber: *The Protestant Ethic and the spirit of Capitalism*. New York 1958.
- J. Weidig: *Bazzano – ein Gräberfeld bei l’Aquila (Abruzzen). Die Bestattungen des 8.–5. Jht. v. Chr.* Monographien des RGZM. Band 112, 2014.
- R. Wenskus: *Stammesbildung und Verfassung. Das Werden der frühmittelalterlichen gentes*. Köln – Graz 1961.
- N. L. Whitehead: *Tribes Make State and States Make Tribes. Warfare and the Creation of Colonial Tribes and States in Northeastern South America*. In: R. B. Ferguson/N. L. Whitehead: *War in the Tribal Zone*. Santa Fe – Oxford 1992, 127–150.
- K. Willvonseder: Neue Latènefunde aus Niederösterreich. *Germania* 16, 1932, 272–275.
- H. Wolfram: *Die Goten. Von den Anfängen bis zur Mitte des sechsten Jahrhunderts. Versuch einer historischen Ethnographie*. München 2009.
- M. Zeiler/P. C. Ramsel/E. Jerem/J. V. S. Megaw: *Stempelgleiche Frühlatène-Keramik zwischen Traisental und Neusiedler See*. In: G. Cooney/K. Becker/J. Coles/M. Ryan/S. Sievers: *Relics of Old Decency: archaeological studies in later prehistory [A Festschrift for Barry Raftery]*. Dublin 2010, 259–276.
- K. W. Zeller: Die „Nordgruppe“ – ein latènezeitliches Gräberfeld am Fuße des Putzenkopfes auf dem Dürrnberg bei Hallein. *Fundberichte aus Österreich* 42, 2003, 525–558.
- E. Zöllner: *Die politische Stellung der Völker im Frankenreich*. Veröffentlichungen des Instituts für österreichische Geschichtsforschung 13. Wien 1950.

SKELETAL INDICATORS OF HEALTH IN LA TÈNE PERIOD POPULATIONS FROM WALPERSDORF AND FRANZHAUSEN MITTE (TRAISEN VALLEY, LOWER AUSTRIA)

Friederike Novotny

INTRODUCTION AND MATERIAL

The Traisen valley in Lower Austria is known for its multitude of archaeological findings, settlements, and large cemeteries. The valley was inhabited in all periods, from the Neolithic to modern times, and is one of the most important and best investigated archaeological regions in Central Europe. Concerning the La Tène period, several settlements and cemeteries enable us to make an assessment of health status and living conditions, as well as an interpretation of possible social differences and biological relations in this particular geographic area (*Gerold 2002; Neugebauer 1992; Novotny et al. 2012; Novotny in prep.; Ramsil 2002; Renhart 1992; 1996*).

The following anthropological report focuses on a selected sample of 12 individuals from two La Tène period cemeteries – namely, Walpersdorf (Industriegelände Inzersdorf-Getzersdorf, Akte 326/1997) and Franzhausen Mitte (Akte 374/1987–1993) located in the Traisen valley, a region along the central Danube area in Lower Austria. Demographic (age and gender) and morphometric (body height) parameters, as well as palaeopathological alterations on the cranial and postcranial skeletal remains, are indicators for e.g., health status, living conditions, injuries, and the activity patterns of the selected individuals.

METHODS

Sex and age determinations provide basic biological information about every individual and are essential for every bioarchaeological approach. For biological sex determination, specific morphological features of the skull and pelvis are used to assure sexual dimorphism (*Bruzek 2002; Ferembach et al. 1979; Nemeskéri et al. 1960*). The scores for cranial and pelvic traits vary from +2 to +1 for male, 0 for sex undetermined and -1 to -2 for female. The characteristic features were graded and weighted (pelvic features were given more weight than cranial features) to identify the sex. However, if an individual shows male- as well as female-associated morphological features, the sex is left as undetermined. Sometimes it also has to be taken into consideration that morphological features show a high variability and are specific for the populations of given periods.

During childhood and adolescence, teeth form and emerge, bones form and epiphyses close, and with increasing age bones degenerate. Therefore, an approximate age at the time of death, as well as an affiliation to an age group, can be identified for each individual. Age determination of children and adolescents is based on dental development (dentition and mineralization; *Ubelaker 1978*), epiphyseal closure (*Ferembach et al. 1979*), and length of bones (*Stloukal/Hanáková 1978*). For skeletons of adults aged 20+, age estimation is achieved by assessing cranial suture fusion (*Rösing 1977*), dental wear patterns (*Miles 1963*), changes of auricular surface of the pubic symphysis (*Brooks/Suchey 1990; Todd 1920*), as well as degenerative bone changes, especially in joints and vertebrae (*Stloukal et al. 1970; Stloukal/Vyhnánek 1975*). An age determination for individuals between 20–30 years can be done by using the articular surface of the sternal end of the clavicle (*Szilvássy 1978*). However, age estimation on the

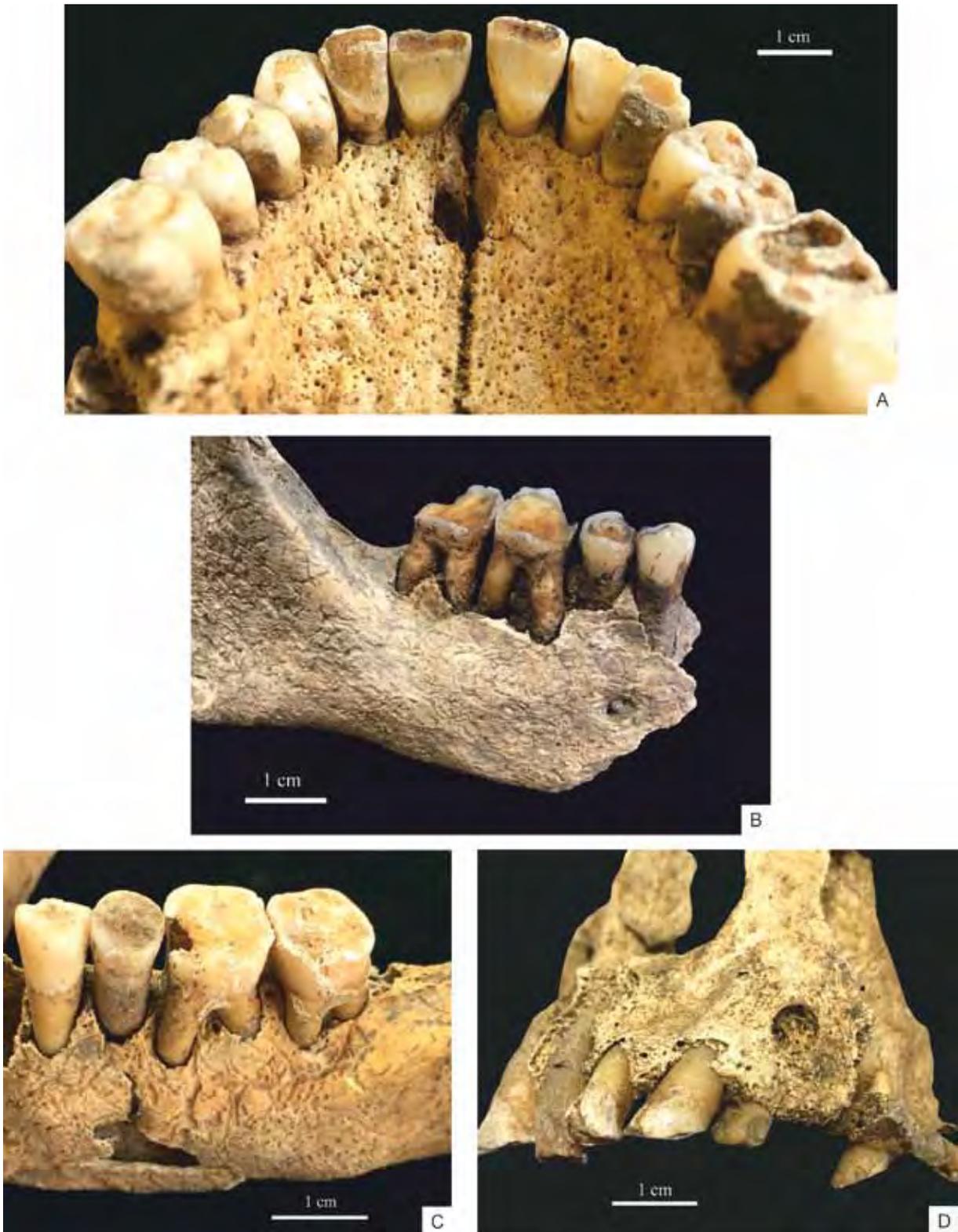


Fig. 1. Tooth and periodontal diseases, dental attrition. A – Franzhausen, grave 295, male, 30–45 years: maxillary view: porotic structures on the hard plate (*stomatitis*) and irregular dental attrition on the right lateral incisor lingual. B – Walpersdorf, grave 4, male, 45–60 years: left mandibula buccal view: severe dental attrition and periodontal disease, aplasia of the third molar. C – Walpersdorf, grave 6, male, 40–55 years: left mandibula buccal: first molar with a mesial located peppercorn-size carious lesion, severe alveolar atrophy and aplasia of the third molar. D – Franzhausen, grave 300, male, 50–70 years: detail left maxilla: severe dental attrition and apical dental abscesses in the area of the second premolar and first molar (including severe porosity and new bone formations).

bones is sometimes less precise because of external factors like nutrition, workload, and pathological alterations, which cause changes in the bones and subsequently lead to changes in their characteristics. Therefore, biological age (=skeletal age) is not identical to chronological age. Thus, age, especially for adult individuals (20+ years), is set in ranges.

For body height, measured values of the long limb bones (humerus, radius, ulna, femur, and tibia) are used and a body height (stature) estimate is calculated according to the regression equations for men (after *Breitinger* 1937) and for women (after *Bach* 1965). Beside genetic variability, the body height of individuals is also affected by diets, diseases, and workload during physical growth and can therefore provide additional information about health and living conditions.

Teeth and alveolar bones were investigated and recorded for caries, periodontal disease, apical lesion, dental calculus, dental attrition, and the existence of linear enamel hypoplasia (LEH). Pathological, traumatic, and degenerative alterations on cranial and postcranial skeletal remains were noted, identified, and diagnosed in terms of infectious diseases, stress markers, intravital and perimortem injuries, as well as activity patterns and workload.

INDIVIDUAL BIOGRAPHIES

Due to the small number of individuals, partially deficient conservation, and bad bone surface preservation, this anthropological study focuses on individual documentation of selected skeletal remains from the cemeteries of Walpersdorf and Franzhausen Mitte. Each of the following individual biographies contains information on health status, infectious diseases, stress markers, traumatic injuries, degenerative changes, dental and periodontal diseases, nutrition, malnutrition, and others matters, and allows rough conclusions about the living conditions of each individual.

Walpersdorf (Industriegelände Inzersdorf-Getzersdorf, Akte 326/1997)

Grave 4

- Sex: male.
- Age: 45–60 years.
- Body height: ca. 168 cm.
- Conservation status: partially preserved cranium and postcranium.
- Bone surface preservation: heavily eroded.
- Sex and age determination: almost all sexual characteristics are of male expression; cranial suture closure (almost all sutures fused) and dental wear (4 and more) point to a mature age between 45 and 60 years.
- Body height: measurements of long bones reveal an approximate body height of 168 cm.

Characteristics:

- Cranium: moderately developed porotic alterations on the external acoustic meatus and the hard palate; porotic new bone formations in the right sinus frontalis.
- Teeth: 4 permanent teeth present in their sockets and 24 isolated; upper second right molar with a pinhead-sized carious lesion; massive dental attrition of molars (partly open pulp cavities) and front teeth (Fig. 1B), slight dental calculus.
- Postcranium: isolated lytic defect (3 × 2 cm) on medial distal shaft of right fibula.
- Anatomical variations: aplasia of lower right third molar (Fig. 1B), upper left lateral incisor and canine with very long roots, bicroot lower first premolars.
- Green stains from bronze: none.
- Conclusion: ascorbic acid (vitamin C) and iron deficiency (e.g., stomatitis), sinusitis frontalis, caries, severe dental attrition, aplasia, tooth root variations; discrepancy of suture closure and dental attrition.

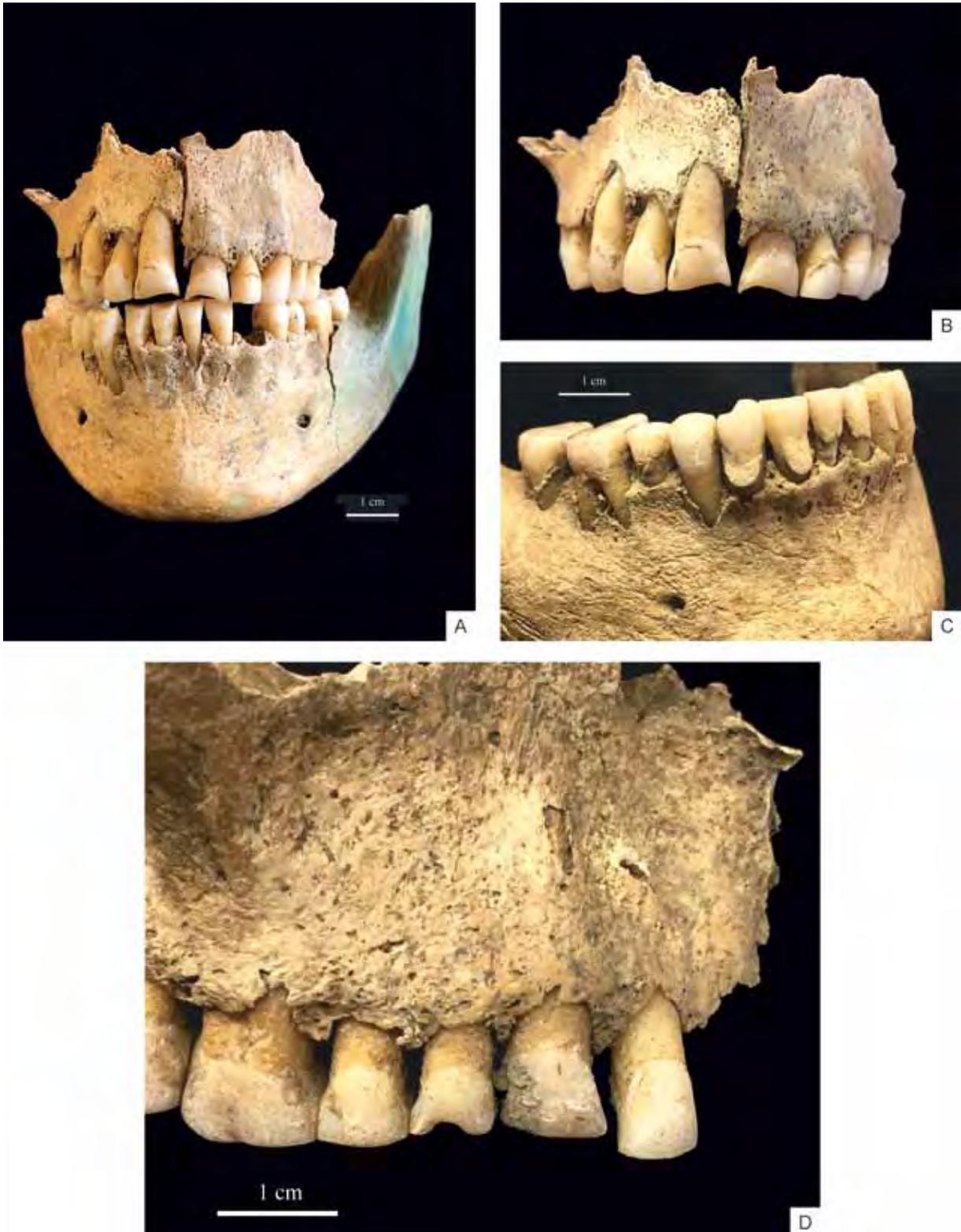


Fig. 2. Artificial dental attrition. A – Franzhausen, grave 817: female, 25–30 years: frontal view maxilla and mandibula: alveolar bones with severe porotic structures and on the maxilla around the nose (piriform aperture), arcuate/shovel-shaped attrition of the central incisors, dental calculus remains and intense green stains of bronze on the left ramus mandibulae. B – see A, detail maxilla: porotic structures and artificial shovel-shaped dental attrition of the incisal edges. C – Franzhausen, grave 590/1: female, 25–35 years: detail right mandibula: severe dental calculus, alveolar atrophy and porotic structures, atypical arcuate abrasion distal of the canine edge. D – Franzhausen, grave 1094: male, 35–45 years: right maxilla: deep groove-like behavioural dental attrition of the first premolar.

Grave 6

- Sex: male.
- Age: 40–55 years.
- Body height: ca. 169 cm.
- Conservation status: well-preserved cranium and postcranium.
- Bone surface preservation: heavily eroded.
- Sex and age determination: almost all sexual characteristics on cranium, mandible, and pelvis are of male expression; cranial suture closure (coronal suture completely and sagittal suture partly fused), dental wear (3b/4a) and facies symphysialis ossis pubis (9/10) point to a mature age between 40 and 55 years.
- Body height: measurements of long bones reveal an approximate body height of 169 cm.

Characteristics:

- Cranium: porotic alterations in the sagittal sinus, on the hard palate, as well as on the maxillary and mandibular alveolar bones; apical mandibular abscess around the right first molar; extended styloid process.
- Teeth: 15 permanent teeth present in their sockets and 6 isolated, intravital loss of 2 teeth; severe dental attrition of molars and front teeth as well as alveolar atrophy; upper left second molar with extensive carious lesion and open pulp cavity; lower left first molar (Fig. 1C) with interstitial peppercorn sized carious lesion; aplasia of both lower third molars
- Postcranium: steep angle of the right and left femoral neck; advanced degenerative changes at the proximal joint of the right fibula.
- Anatomical variations: aplasia of both mandibular third molars and additional cusp on the upper left second molar; enlarged frontal sinuses.
- Green stains from bronze: none.
- Conclusion: ascorbic acid and iron deficiency (e.g., stomatitis); caries, dental calculus, periodontitis, alveolar abscess, aplasia, Carrabelle tubercle, Eagle syndrome, discrepancy of suture closure and dental attrition.

Grave 8

- Sex: male.
- Age: 30–40 years.
- Body height: ca. 169 cm.
- Conservation status: well-preserved cranium and postcranium.
- Bone surface preservation: heavily eroded.
- Sex and age determination: a few sexual characteristics on the cranium, mandible, and pelvis are of male as well as of female expression; pelvic features are predominantly male; cranial suture closure (coronal and sagittal suture completely and lambda suture partly fused), dental wear (2a/b) and facies symphysialis ossis pubis (5/6) point to an adult aged between 30 and 40 years.
- Body height: measurements of long bones reveal an approximate body height of 169 cm.

Characteristics:

- Cranium: endocranial vault with pinhead- and peppercorn-sized lytic lesions on the frontal bone and both parietal bones and increased imprints of blood vessels; porotic bone alterations and new bone formations in the left orbital cavity and in the anterior cranial fossa (next to crista frontalis and above the left orbital); moderately porotic structures in the sagittal sinus, on the hard palate and the maxillary and mandibular alveolar bones.
- Teeth: 19 teeth present in their sockets and 13 isolated; moderate to heavy dental calculus and slight alveolar atrophy.
- Postcranium: none (bone surface too heavily eroded).
- Anatomical variations: four-rooted right upper third molar with an additional cusp palatal.
- Green stains from bronze: traces on the left clavicle.
- Conclusion: ascorbic acid and iron deficiency (stomatitis); exo- and endocranial inflammatory processes in and around the left orbit; dental calculus, periodontitis, alveolar atrophy, Carrabelle tubercle, discrepancy of suture closure and dental attrition, massive frontal sinuses.

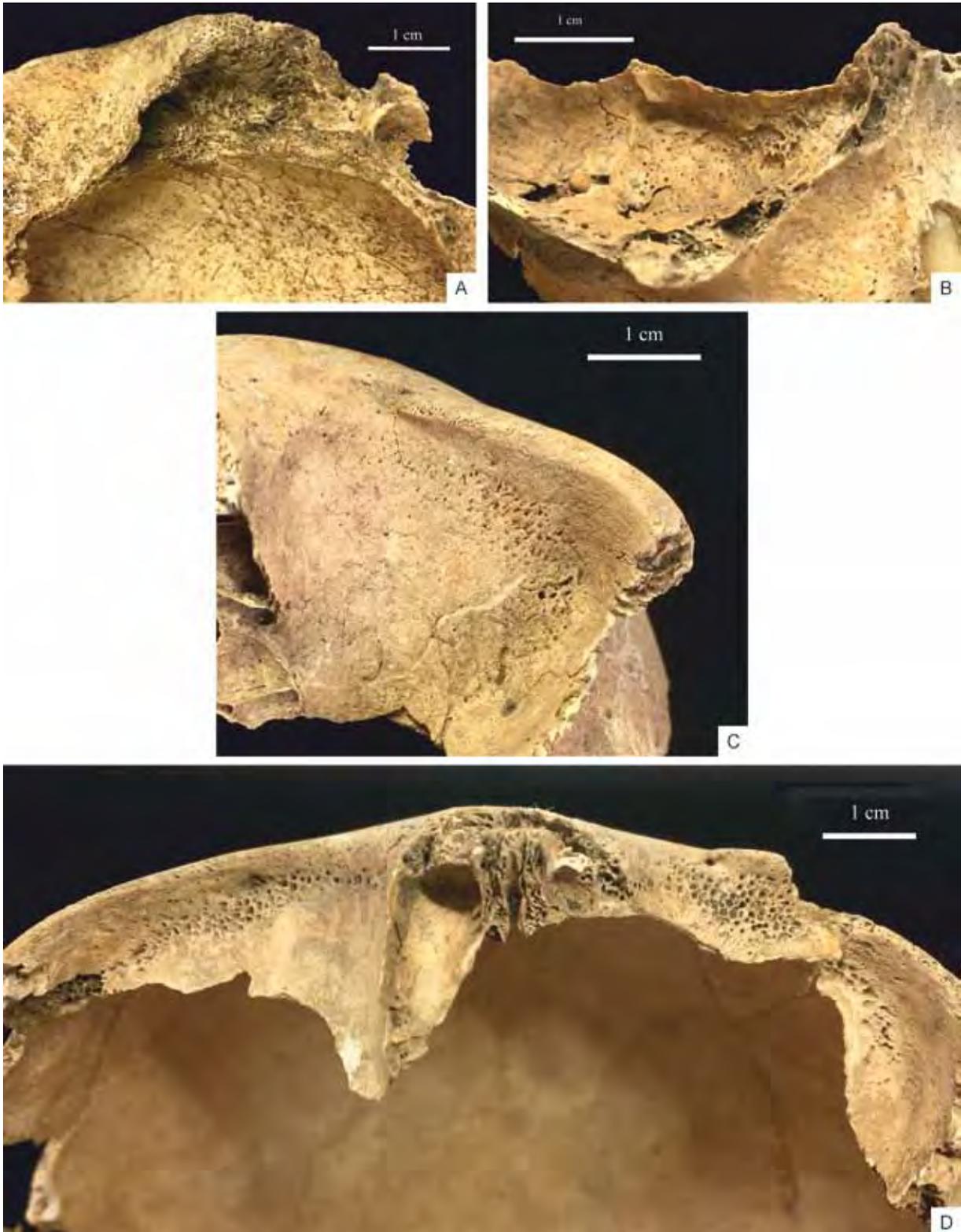


Fig. 3. Indicators of injury, stress and/or infection. A – Franzhausen, grave 300, male, 50–70 years: strong inflammatory and reactive bone alterations in the right sinus frontalis, in the left orbital cavity and endocranium at the anterior cranial fossa caused by an intravital, healed traumatic injury at the upper margin of the left orbit. B – Franzhausen, grave 817, female, 25–30 years: right sinus maxillaris with massive inflammatory processes and spikulae-like alterations (*sinusitis maxillaris*). C – Franzhausen, grave 590/1, female, 25–35 years: porotic structures in the left orbital roof (*cribra orbitalia*). D – Franzhausen, grave 814/2, child, 4–5 years: severe porotic structures in both orbital roofs (*cribra orbitalia*).

Franzhausen Mitte (Akte 274/1983–1991)

Grave 295 (Akte 274/1987)

- Sex: male.
- Age: 30–45 years.
- Body height: ca. 174 cm.
- Conservation status: partially preserved cranium and postcranium.
- Bone surface preservation: heavily eroded.
- Sex and age determination: all specific sexual characteristics on cranium, mandible, and pelvis are of male expression; cranial suture closure (C1 of the coronal suture completely fused), dental wear (2a–c) and facies symphysialis ossis pubis (8/9) point to a mature age between 30 and 45 years.
- Body height: measurements of long bones reveal an approximate body height of 174 cm.

Characteristics:

- Cranium: severe porotic structures on the external acoustic meatus, in both orbital roofs, the hard palate, and the maxillary and mandibular alveolar bones (Fig. 1A).
- Teeth: 27 teeth present in their sockets and 1 isolated, 2 teeth with intravital loss and 2 with postmortem loss; maxillary second right molar with pinhead-sized carious lesion, slight dental calculus, heavily alveolar atrophy, grooved abrasion on the incisal edge of upper right central incisor and irregular dental attrition on the right second incisive palatal (Fig. 1A), intravital enamel chipping of the upper canines and right premolars.
- Postcranium: osteophytic development with moderate to severe new bone formations on the vertebral body cover plates on some cervical vertebrae (sixth and seventh formed a pseudo joint) and on the third and fourth lumbar vertebrae (Fig. 5D); possible healed traumatic injuries in the area of the right transversal process of the twelfth thoracic and in the thickened proximal shaft area of the right humerus; both tibiae with strong periosteal longitudinal striation as well as general porosities and remodelled new bone formations in the shaft area.
- Anatomical variations: none.
- Green stains from bronze: severe stains on the mandible and traces on all cervical vertebrae; small scale rust-red colouration on some ribs.
- Conclusion: ascorbic acid and iron deficiency (e.g., cribra orbitalia, stomatitis, and periostitis); periodontitis, artificial dental wear and intravital chipping of teeth, spondylosis and spondylarthrosis deformans, old traumatic injuries, signs of specific overuse patterns on both tibiae.

Due to the above described alterations such as old fractures, strong signs of overuse on the spine, robust long bones including stronger enthesal alterations as well as specific overuse signs in the form of periosteal irritations, together with the stature (height of about 174 cm) and due to the shield and sword found in the archaeological grave inventory, this individual could be classified as a male ‘warrior’.

Grave 300 (Akte 274/1987)

- Sex: male.
- Age: 50–70 years.
- Body height: –
- Conservation status: partially preserved cranium and badly preserved postcranium.
- Bone surface preservation: heavily eroded.
- Sex and age determination: all specific sexual characteristics on cranium, mandible, and pelvis are of male expression; cranial suture closure (C1 of the coronal suture and S1 of the sagittal suture completely fused), dental wear (4+), heavily degenerative changes on spine and joints as well as osteoporotic bones point to a mature/senile male aged between 50 and 70 years.
- Body height: –

Characteristics:

- Cranium: severe porotic alterations on the external acoustic meatus, on the hard palate and the maxillary and mandibular alveolar bones; strong inflammatory changes and reactive bone alterations on

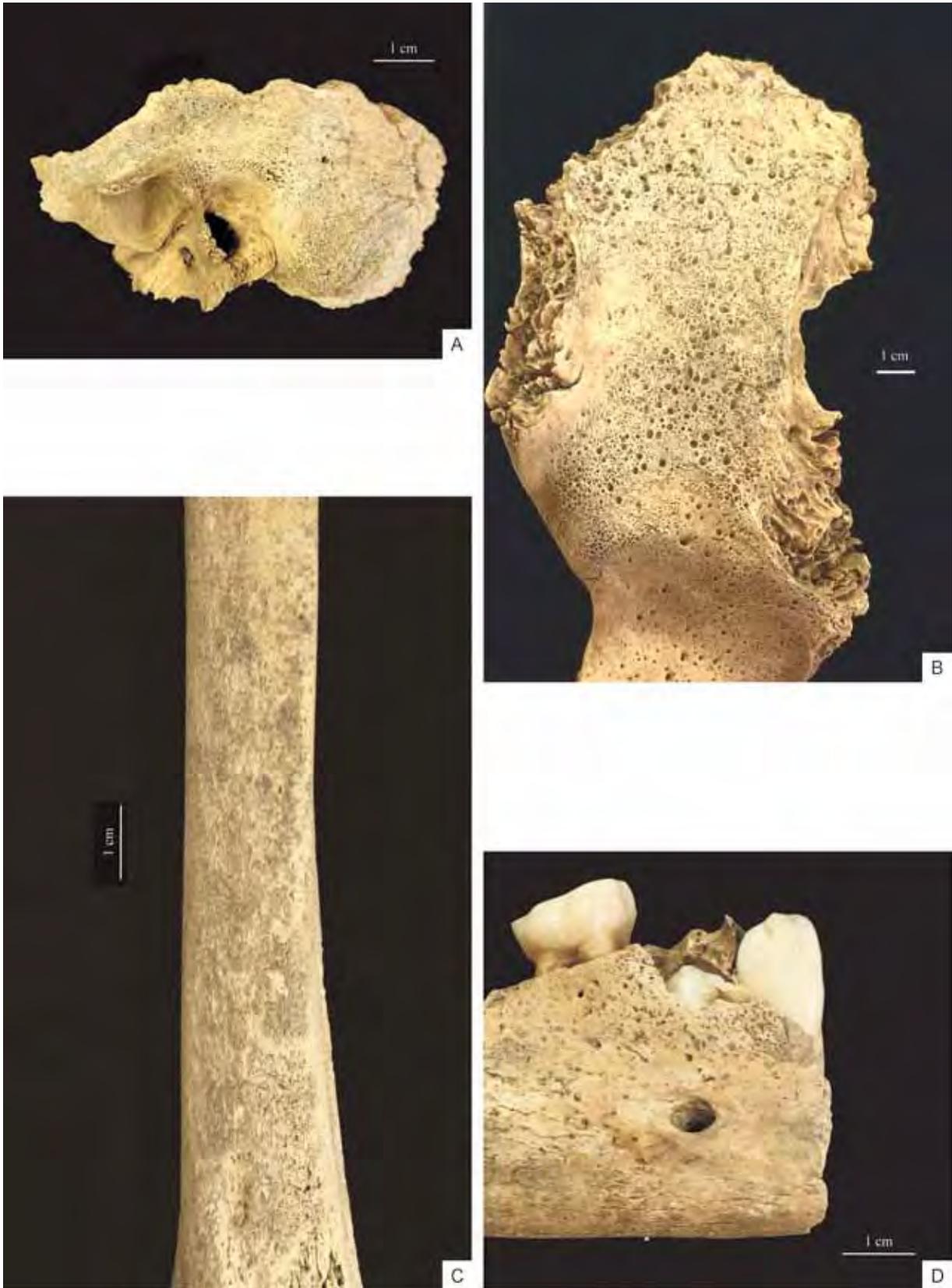


Fig. 4. Non-specific indicators of stress related to scurvy. A – Franzhausen, grave 814/2, child, 4–5 years: porotic structures and new bone formations on the external layer of the left temporal bone. B – see A, on the external layer of the left sphenoidal bone. C – see A, finely structured and porotic new bone appositions on the lateral left tibia shaft. D – Franzhausen, grave 814/1, child, 9–10 years: fine porotic changes and new bone appositions on the mandibular alveolar bone.

the right sinus frontalis, on the left orbital roof, the left sinus frontalis and endocranial on the anterior cranial fossa (Fig. 3A); upper margin of left orbit with healed defect (injury?); endocranial vault with increased imprints of blood vessels; inflammatory changes on the right and left maxillary sinus and on the labial surface of the maxilla; multiple apical abscesses in the area of the upper left incisor, the second premolar and first molars (Fig. 1D), as well as in the area of the lower left canine; local porotic new bone formation (1.5 x 1 cm in size) in the root area of the left canine on the mandibular bone (in the area of a large dental abscess).

- Teeth: 16 teeth present in their sockets, 3 teeth lost intravital, and 3 postmortem; 7 teeth present as root remnants; massive dental wear, especially in the anterior region (including open pulp cavities) and groove-like wear on the edges of the upper left lateral incisor and canine; massive dental calculus and severe alveolar atrophy; upper left central incisor and lower right first premolar with tooth enamel and tooth root splintering.
- Postcranium: inflammatory changes on corpus and joints of the third to seventh cervical and first to sixth thoracic vertebrae; severe, strongly enthesal and degenerative changes on the clavicle (costoclavicular ligament) and correspondingly on the manubrium; generally signs of increased bone loss.
- Anatomical variations: none.
- Green stains from bronze: none.
- Conclusion: ascorbic acid and iron deficiency (e.g., cribra orbitalia, stomatitis, periodontitis), sinusitis frontalis and maxillaris, granular foveolae, digitate impressions; apical abscesses, massive dental calculus, intravital tooth loss, artificial dental wear; spondyloses and spondylarthrosis deformans; osteoporosis.

Probable healed defect caused by a traumatic cranial injury at the upper margin of the left orbit, which may have led to severe inflammatory changes with partial massive bone remodeling in the frontal bone (affecting the external and internal lamina), in and around both orbitals and in the right and left frontal sinus area (especially strong new bone alterations in the right sinus frontalis with spread of inflammation into endocranial parts of the skull).

Grave 373 (Akte 274/1987)

- Sex: male.
- Age: 25–35 years.
- Body height: ca. 170 cm.
- Conservation status: partially preserved cranium and postcranium.
- Bone surface preservation: heavily eroded.
- Sex and age determination: all specific sexual characteristics on cranium, mandible, and pelvis are of male expression; missing cranial suture closure and dental wear (2a/b) point to an adult aged between 25 and 35 years.
- Body height: measurements of long bones reveal an approximate body height of 170 cm.

Characteristics:

- Cranium: heavily porotic alterations on the external cranial layer, the external acoustic meatus as well as on the maxillary and mandibular alveolar bones; massive inflammatory changes with newly built bone on the hard palate.
- Teeth: 27 teeth present in their sockets and 1 isolated, 2 teeth postmortem loss, dental calculus, slight LEH and alveolar atrophy, intravital buccal enamel chipping on the upper right second (pinhead-size) and upper left second premolars (up to the dentin); slightly grooved abrasion of the incisal edges of the upper left central and lateral incisors.
- Postcranium: first metacarpal of the left hand with an old healed fracture (Fig. 6A) and corresponding changes in the proximal phalanx joint; enlarged lateral articular surface of the right first metacarpal I caput (Fig. 6A), severe degenerative changes of the proximal and distal joints of the right second and third metacarpal as well as of the carpal bones (especially hamate and trapezoid bone); fifth lumbar vertebra with an open vertebral arch (Fig. 5C); two ribs with small-scale porotic newly built bone alterations pleural; increased porotic changes in the cervical region of the right femur and around the hip joint as well as on the femoral head in the area of the fovea capitis (with stronger

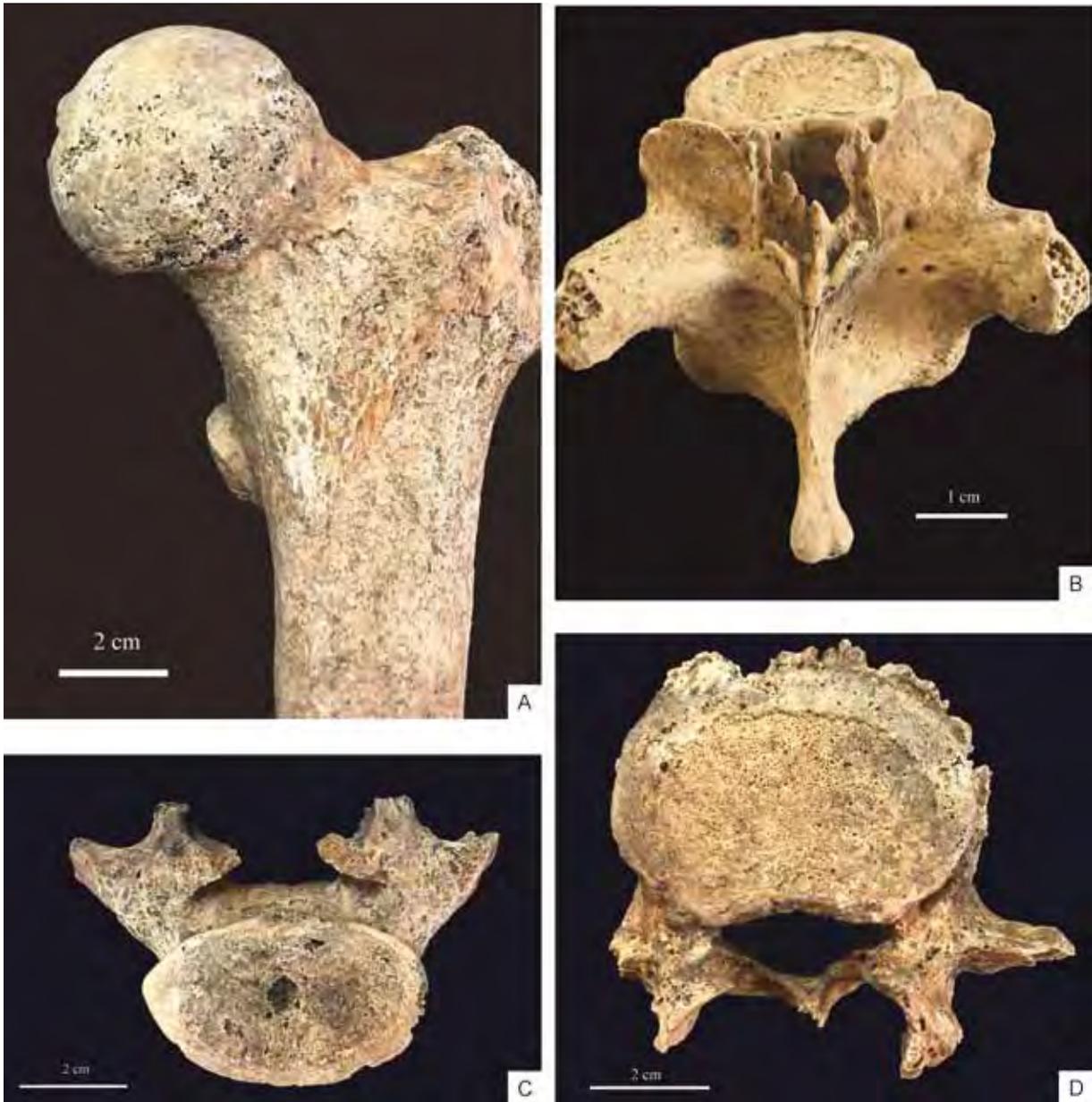


Fig. 5. Activity patterns and degenerative changes. A – Franzhausen, grave 1094, male, 35–45 years: extension of the auricular surface on the left femoral head toward the anterior femoral neck (*facies poirier*). B – see A, ninth thoracic vertebra with signs of general ossification of the ligamentous attachments. C – Franzhausen, grave 373, male, 25–35 years: fifth lumbar vertebra with an open vertebral arch (*spondylolysis*). D – Franzhausen, grave 295, male, 30–45 years: fourth lumbar vertebra cover plate and annulus area with degenerative changes (*osteochondrosis*).

border lip formation) and correspondingly greater changes in the acetabular fossa; severe porotic and proliferative alterations on the right and left ilium in the upper part of the incisura; enforced muscular insertion of the gastrocnemius muscle (medial caput) of both femurs; imprint on the anterior margin of the femoral neck close to the head on the right femur.

- Anatomical variations: buccal pits on the lower second permanent molars, bilateral perforation of the olecranon fossa on both humeri.
- Green stains from bronze: none.
- Conclusion: ascorbic acid and iron deficiency (e.g., porotic hyperostosis, stomatitis), periodontitis, spondylolysis and severe activity patterns on the postcranial remains; plaque and cribra femoris, foramina ceca and foramina olecranon.

The degenerative changes of the bones of this individual, especially on the thumb and pelvis as well as on the femora, could be an indication of archery and riding activity. Together with the old healed postcranial fracture and the arrowheads in the burial inventory, this individual could be classified as a 'mounted archer'.

Grave 590/1 (Akte 274/1991)

- Sex: female.
- Age: 25–35 years.
- Body height: ca. 161 cm.
- Conservation status: well-preserved cranium and postcranium.
- Bone surface preservation: heavily eroded.
- Sex and age determination: all specific sexual characteristics on cranium, mandible, and pelvis are of female expression; missing cranial suture closure, dental wear (2b), and facies symphysialis ossis pubis (6) point to an adult age between 25 and 35 years.
- Body height: measurements of long bones reveal an approximate body height of 161 cm.

Characteristics:

- Cranium: severe porotic alterations on the external skull layer in the region of the occipital bone, on both orbital roofs (Fig. 3C), the external acoustic meatus, the skull base, the hard palate, and the maxillary and mandibular alveolar bones; inner cranial layer with strong imprints of the artery meningea and three areas with distinct pinhead-sized or partially elongated destructive changes at the anterior cranial fossa; possible perimortem fracture-lines on the occipital bone in the posterior margin of the foramen magnum.
- Teeth: 24 teeth present in their sockets and 6 isolated, 2 teeth non inherent; 2 carious pinhead-size lesions on the upper left third molar and lower first molars; dental calculus and alveolar atrophy; atypical arcuate abrasion distal at the edge of the lower right canine (Fig. 2C) and intravital chipping of the enamel of the lower left second premolar distal.
- Postcranium: vertebral joints of the first and second cervical vertebrae with stronger degenerative marginal lip alterations (corresponding joint changes on the occipital condyles); ninth to twelfth thoracic and first to fourth lumbar vertebrae with break-ins in the cover and base plates; ninth to eleventh thoracic and third to fifth lumbar vertebrae with sclerotic and proliferative changes at the vertebral apophysis as well as severe porosity at the vertebral body; severe degenerative changes on the right hand bones: scaphoid bone with increased bony edge formations and one phalanx medialis with porotic structures and marginal ridge formation in the upper proximal joint area; proliferative appositions on the left ilium in the upper part of the incisura (acting like a type of reinforcing preauricular sulcus) and on the left first rib; periosteal longitudinal grooves in the shaft areas of both femora and an inflammatory bone surface posterior in the lower shaft of the left femur; sharp fracture patterns on the first and second cervical vertebrae (in the area of the fovea dentis and on the dens axis) as questionable perimortem injuries.
- Anatomical variations: aplasia of the lower third molars, right sulcus, and left canal for vertebral artery at the first cervical vertebra.
- Green stains from bronze: none.
- Conclusion: ascorbic acid and iron deficiency (e.g., porotic hyperostosis, cribra orbitalia, stomatitis, periostitis), Schmorl nodes, massive degenerative arthritic alterations in right hand; osteochondrosis, probable perimortem injuries on the cranium and the first and second cervical vertebrae.

The severe degenerative alterations on joints and vertebrae (e.g., arthritic changes, Schmorl nodes, osteophytic development) indicate heavy and continuous work activity from younger age on; the suspicious perimortem fracture patterns on cranium and vertebra need further investigations.



Fig. 6. Intravital injury and activity patterns. A – Franzhausen, grave 373, male, 25–35 years: left and right first metacarpal bones: left metacarpal with an old healed fracture in the caput region and right metacarpal caput with greatly enlarged lateral articular surface. B – Franzhausen, grave 1094, male, 35–45 years: palmar view: right and left first metacarpal bones with enlarged lateral and medial articular surface and three proximal phalanges with severe enthesal changes.



Fig. 7. Variations and specifics. A – Franzhausen, grave 814/1, child, 9–10 year: first cervical vertebra (*atlas*) with an unclosed anterior arch and corresponding scattered structures on the dens axis of the second cervical vertebra (*axis*). B – Franzhausen, grave 590/2, foetus, 7,5–8 lunar month: cranial and postcranial remnants of a foetus found in the pelvic region of the adult woman from grave 590.

Grave 590/2 (Akte 274/1991)

- Sex: foetus.
- Age: 7.5–8 lunar months.

The small human remnants found within the skeletal remains of the adult woman from grave 590 are from a foetus in the developmental stage of the 7.5–8 lunar months. The foetal remains were already recognized during the excavation and noted in the records of the archaeologists. The few remnants include a fragment of the right pars petrosa, fragments of the left ulna, a fragment of the right ilium bone, as well as rib and vertebral fragments (Fig. 7B) with no special characteristics and anatomical variations.

Grave 814/1 (Akte 274/1992), Skeleton A

- Sex: child.
- Age: 9–10 years.
- Conservation status: well-preserved cranium and postcranium.
- Bone surface preservation: heavily eroded.
- Sex and age determination: the determination of the age of death between 9 and 10 years is due to the mineralization and dentition of deciduous and permanent teeth and due to the length of the long bones (humerus: 207 mm, radius: 156 mm, femur: 300 mm and tibia: 239 mm).

Characteristics:

- Cranium: exocranial layer with heavily porotic alterations on the right orbital roof, the external ear canal, the hard palate, the maxillary and mandibular alveolar bones and the petrous part of the temporal bone; fine-porous newly built bone appositions above the right and left orbital areas and in the maxillary and mandibular alveolar regions (labial, buccal, and in the labial ramus area, Fig. 4D); endocranial layer with heavily porotic alterations in the inner ear area, increased gyri impressions in the frontal and parietal bones as well as in the posterior cranial fossa, strong vessel impressions possible due to intracranial pressure and deep and angular sulci for the transversal sinus and the confluens sinus (Fig. 8B); perimortem fractures on the cranium (especially a triangular fracture pattern in the upper left part of the occipital bone with radiating fracture lines and characteristic breakage patterns in the area of the foramen magnum with internal bevelling and chipping, Fig. 8A; 8B).
- Teeth: 2 deciduous and 8 permanent teeth present in their sockets, 5 deciduous and 3 permanent teeth isolated and 16 dental germs; dot-like LEH on both lower deciduous canine.
- Postcranium: subperiosteal calcified haemorrhages (severe porotic structures and fine porous layers of calcified new bone formations) on both clavicle and ilium bones; periosteal and porotic altered bone surfaces on both radii, ulnae, metacarpal bones, femora, tibiae and fibulae; vertebrae with severe porotic structures; questionable perimortem incisions (length about 1 cm) posterior and medial in the proximal joint area of the left ulna (Fig. 8C); first cervical vertebra (atlas) with an unclosed anterior arch (facet of atlas for dens missing, Fig. 7A) and sharp and sometimes lip-like bent up formations at the margins of the superior and inferior articular processes; second cervical vertebrae (axis) with scattered structures on the dens axis (corresponding alterations to the open anterior arch of the atlas).
- Anatomical variations: ossiculae lambdae, buccal pit defects on both lower deciduous canine, opened anterior arch of the atlas (C1) and right transverse foramen (C2).
- Green stains from bronze: massive at the occipital bone, on the right mastoid process, the left and right scapula and clavicle, both forearms (incl. hands) and lower legs.
- Conclusion: massive signs of ascorbic acid and iron deficiency (e.g., cribra orbitalia, scurvy; Möller-Barlow); increased gyri imprints with suspicion of a cerebral compression; possible developmental disorders on the first cervical vertebra (atlas with an unclosed anterior arch and missing facet of atlas for dens), perimortem traumatic injuries on the cranium and two perimortem (?) incisions on the left ulna; dot-shaped LEH as a genetic fingerprint.



Fig. 8. Signs of perimortem intentional violence. A – Franzhausen, grave 814/1 (child, 9–10 years) and 814/2 (child, 4–5 years): triangular fracture patterns with radiating fracture lines on the occipital bones of both individuals, occipital bones with intense green stains of bronze. B – detail 814/1: view on the endocranial layer of the occipital bone: deep and angular sulci for the transversal sinuses and the confluens sinus and a triangular fracture with radiating fracture lines as well as characteristic breakage patterns in the area of the foramen magnum with internal bevelling and chipping. C – detail 814/1: 2 perimortal (?) incision marks (1 cm long) in the proximal joint area of the left ulna.

Grave 814/2 (Akte 274/1992), Skeleton B

- Sex: child.
- Age: 4–5 years.
- Conservation status: well-preserved cranium and postcranium.
- Bone surface preservation: heavily eroded.
- Sex and age determination: the determination of the age of death between 4 and 5 years is due to the mineralization and dentition of deciduous and permanent teeth and due to the length of the long bones (humerus: 145 mm, radius: 110, ulna: 122 mm and femur: 203 mm).

Characteristics:

- Cranium: subperiosteal calcified haemorrhages (strong porosity and fine porous layers of calcified new bone formations) on the external cranial layer of the frontal bone (region of orbital and temple), the sphenoidal and temporal bones (Fig. 4A; 4B), the hard palate and the maxillary and mandibular alveolar bones; heavily porotic alterations on both orbital roofs (Fig. 3D), around the aperture piriformis and the nasal spine; moderate porotic, calcified newly built bone formations on the endocranial layer in the anterior cranial fossa, in the sinus sagittalis, in the left sigmoid sinus, on the petrous part of the temporal bone and the inner ear areas (both internal acoustic meatus); endocranial layer with increased gyri imprints in the parietal and occipital bones and with stronger imprints of the venous vessels; deep and angular sulci of the sinus sagittalis and the transverse sinus; sharp fracture breakages around the foramen magnum; perimortem traumatic injuries on the cranium (especially a triangular fracture pattern on the occipital bone [Fig. 8A] and a fracture at the left parietal bone).
- Teeth: 9 deciduous teeth present in their sockets and 4 isolated; 4 dental germs.
- Postcranium: subperiosteal calcified haemorrhages (strong porosity and fine newly built bone appositions) on both clavicles, humeri, ulnae and radii as well as on both femora and tibiae (Fig. 4C); periosteal and porotic altered bone surfaces on both tibiae and fibulae; massive porotic vertebra bodies and joints; possible perimortem fracture at the midshaft of the right humerus.
- Anatomical variations: Green stains from bronze: massive on the occipital bone, the right scapula, left and right clavicle, right forearm and hand, right pubis bone, right tibia and fibula, vertebrae and ribs.
- Conclusion: severe signs of ascorbic acid and iron deficiency: cribra orbitalia, scurvy (Möller-Barlow); increased gyri imprints in the back of the head with a suspicion of cerebral compression; perimortem traumatic injuries on the cranium and possible on the postcranium.

Grave 817 (Akte 274/1992)

- Sex: female.
- Age: 25–35 years.
- Body height: ca. 162 cm.
- Conservation status: partially preserved cranium and postcranium.
- Bone surface preservation: heavily eroded.
- Sex and age determination: all specific sexual characteristics on cranium, mandible, and pelvis are of female expression; cranial suture closure (sagittal suture at S1+2 partly fused), dental wear (3b), facies symphysialis ossis pubis (4) and the sternal facies of the clavicle (3) point to an adult aged between 25 and 35 years.
- Body height: measurements of long bones reveal an approximate body height of 162 cm.

Characteristics:

- Cranium: porotic alterations on the left orbital roof, the hard palate, the maxillary and mandibular alveolar bones, and around aperture piriformis (Fig. 2A; 2B); severe spicule-like new bone formations in the right maxillary sinus (Fig. 3B); destructive lytic changes (0.2–0.5 cm) at the internal cranial layer of the frontal bone.
- Teeth: 27 teeth present in their sockets and one isolated; aplasia of four teeth; arcuate/shovel-shaped abrasion on the upper incisal edges, moderately LEH, dental calculus and alveolar atrophy (Fig. 2A; 2B).

- Postcranium: small-scale porotic appositions on the internal layer of one rib fragment; periosteal alterations on the shaft areas of both femora and tibiae.
- Anatomical variations: aplasia of all third molars, tongue-like dental features buccal on the upper and lower second molars (lingula enamela).
- Green stains from bronze: massive on the left side of the cranium (incl. mandibula) and on the upper left leg, ribs and vertebrae.
- Conclusion: ascorbic acid and iron deficiency (e.g., porotic hyperostosis, cribra orbitalia, stomatitis, periostitis); sinusitis maxillaris, artificial abrasion of the front teeth, lingual enamela, aplasia.

Grave 1094 (Akte 274/1993)

- Sex: male.
- Age: 35–45 years.
- Body height: approx. 173 cm.
- Conservation status: well-preserved cranium and postcranium.
- Bone surface preservation: heavily eroded.
- Sex and age determination: all specific sexual characteristics on cranium, mandible, and pelvis are of male expression; cranial suture closure (S1 and C1 closed), dental wear (2c/3a) and facies symphysialis ossis pubis (9) point to an adult/mature age between 35 and 45 years.
- Body height: measurements of long bones reveal an approximate body height of 173 cm.

Characteristics:

- Cranium: porotic alterations on the left orbital roof, the hard palate, the maxillary and mandibular alveolar bones, the external acoustic meatus and in the sinus sagittalis; endocranial layer with strong impressions and ramifications of the blood vessels; severe alveolar atrophy, local porotic appositions on the maxillary bone in the area of the upper third molars; old healed impression fracture (2.5 x 2 cm) located at the right frontal bone.
- Teeth: 31 teeth present in their sockets and 1 isolated; deep groove-like behavioural dental attrition of the upper right first premolar (Fig. 2D) and irregular abrasion of the molars, moderately dental calculus.
- Postcranium: several ribs with serrated new bone formations as signs of healed injuries; bony alterations on the auricular facets of a few ribs and corresponding vertebrae; severe ossification of rib cartilages and spine ligaments (Fig. 5B); sclerotic and proliferative alterations on cervical to lumbar vertebral bodies; strong laterality difference of the upper extremity (right clavicle and humerus more pronounced than the left with stronger overuse in the shoulder girdle); caput of the right first metacarpal with enlarged lateral and medial articular surfaces and caput of the left first metacarpal with extended medial articular surface (Fig. 6B), strong margins on the proximal to distal phalanges, as well as on the proximal and distal phalanges of the thumbs (Fig. 6B); periosteal alterations on the shaft areas of both femora and tibiae; reactive porotic new bone formation on the plantar lateral shaft side of the left first metatarsal; both femora with ligament-enhanced intertrochanteric line (insertion of the vastus lateralis and medialis muscles) and reinforced approach of the gluteal muscles; extension of the auricular surface of the femoral head toward the anterior femoral neck (Fig. 5A); both femora with a relative short femoral neck (Fig. 5A).
- Anatomical variations: none.
- Green stains from bronze: none.
- Conclusion: ascorbic acid and iron deficiency (e.g., porotic hyperostosis, stomatitis, periostitis); digital impressions and granular foveolae, artificial abrasion of the first premolar, osteochondrosis, intra-vitam healed impression fracture on the frontal bone and healed fractures of various ribs; Facies Poiriers, typical enthesal changes on the femora and pelvis, periosteal inflammatory signs on both femora and tibiae shaft areas; massive enthesal changes on the postcranium (e.g., hands, legs, and spine); signs of general ossification of cartilaginous or ligamentous attachment sites (including ribs, vertebrae).

Due to the above described alterations such as old traumatic injuries, severe overuse of the shoulder girdle, hands (especially the thumb), spine, pelvis, and legs together with the arrowheads in the archaeological grave inventory, this individual could be classified as a ‘mounted archer’.

RESULTS

The below table lists all the individuals from ten graves belonging to the La Tène period cemeteries in Walpersdorf and Franzhausen Mitte, with grave number, sex, age, and body height.

Table 1. Grave, sex, age, and body height of twelve individuals from ten graves from the La Tène period cemeteries in Walpersdorf and Franzhausen Mitte (FH), Traisental, Lower Austria.

Site	Grave	Sex	Age	Body height
Walpersdorf	4	male	45–60 years	ca. 168 cm
Walpersdorf	6	male	40–55 years	ca. 169 cm
Walpersdorf	8	male	30–40 years	ca. 169 cm
Franzhausen	295	male	30–45 years	ca. 174 cm
Franzhausen	300	male	50–70 years	–
Franzhausen	373	male	25–35 years	ca. 170 cm
Franzhausen	590/1	female	25–35 years	ca. 161 cm
Franzhausen	590/2	foetus	7.5–8 lunar months	–
Franzhausen	814/1	child	9–10 years	–
Franzhausen	814/2	child	4–5 years	–
Franzhausen	817	female	25–35 years	ca. 162 cm
Franzhausen	1094	male	35–45 years	ca. 173 cm

The ten graves contain twelve skeletal remains of nine adult individuals (seven males and two females) and three subadults (two children and one foetus). Two graves from Franzhausen are double burials: grave 814 with a regular double burial of two children and grave 590 with the burial of an adult woman and the skeletal remains of a foetus.

The **pathological, degenerative** and **traumatic alterations** found in the human skeletal remains of the La Tène period populations from Walpersdorf and Franzhausen range from non-specific indicators of stress and infectious diseases on the exo- and endocranial layer of the skull and the shaft of the long bones to proliferative alterations in the frontal and maxillary sinuses, at the hard palate, and alveolar bones. Furthermore, intravital healed and perimortem traumatic injuries, degenerative changes, and occupational stress markers on joints and spine were diagnosed.

Porotic structural (cribrotic) defects on the external cranial layer (**porotic hyperostosis**) and in the orbital roofs (**cribra orbitalia**) as well as periosteal bone alterations on the long bones (**periostitis**) are considered to be **stress markers** of ascorbic acid (vitamin C) and iron deficiency. These alterations are found with subadult as well as adult individuals with a weakened immunity due to dietary deficiencies, chronic infectious diseases, or even the occurrence of parasites (*Grupe et al. 2015; Schultz 1989; Stuart-Macadam 1987; 1992; Stuart-Macadam/Kent 1992*).

A permanent deficiency of ascorbic acid encourages the development of **scurvy** and results in subperiosteal haemorrhages, which calcify and appear as finely structured or finely porous bone deposits. These deposits were preserved in the alveolar bone, on the skull vault and the long bone shafts of the remains of the two children of FH grave 814. Childlike scurvy is often referred to as Möller-Barlow disease (*Barlow 1895; Möller 1859*).

An accompanying symptom of a chronic ascorbic acid (vitamin C) deficiency is typically an iron deficiency since the body is not able to absorb enough iron due to the lack of ascorbic acid. However, this can also have a genetic or dietary origin.

Evidence of a (chronic) ascorbic acid and/or iron deficiency as a stress factor due to malnutrition and/or (infectious) diseases can be found in several subadult and adult individuals from Walpersdorf and Franzhausen Mitte. These are porosity and new bone formations on the hard palate (**stomatitis**) and in the alveolar areas of the maxilla and mandible (Fig. 1A; 2A; 2B), severe calcified porotic newly built bone appositions on the external cranium and postcranium (scurvy, Fig. 4B; 4C) and porosities in the outer skullcap or orbital roof (porotic hyperostosis and cribra orbitalia, Fig. 3C; 3D).

Other alterations like moderate newly built bone appositions on the endocranial layer and in the venous sinuses as well as increased endocranial gyri imprints (possible due to intracranial pressure), observed in both children from FH grave 814, indicate an inflammation of the meninges (**meningitis**; Lewis 2004; Schultz 1993).

Dental and periodontal diseases (e.g., caries, dental calculus) and the occurrence and pattern of tooth wear point to dental care, dietary behaviour (even coarse, abrasive diet), and cultural habits. A carbohydrate-rich diet (such as cereals and legumes, meat, and honey) affects the enamel of the teeth, promotes the development of carious lesions which can range from smaller cavities to pinhead or peppercorn size lesions, and subsequently destroys the whole tooth crown. Carious lesions were found to be present in only four adult individuals (three male and one female) with a maximum of two carious teeth per individual (e.g., Fig. 1C). This is quite interesting, because other La Tène period populations of the Traisen valley have a much higher rate and intensity of tooth decay (Gerold 2002; Novotny *in prep.*; Renhart 1992; 1996). Even the moderate occurrence of dental calculus as a sign of a protein-less diet (e.g., meat), distinguishes the individuals of the present study from other Celtic populations. An underlying reason could be a dietary difference and/or dietary changes amongst these groups. However, it could also be a simple sampling effect, since only a few individuals from the populations of Walpersdorf and Franzhausen Mitte were selected and investigated for this current study.

Particularly conspicuous is the intensity of dental attrition and the occurrence of artificial behavioural dental attrition. Severe to extreme dental attrition was identified with almost all adult individuals (except the adult man from Walpersdorf grave 8 with only slight abrasion), which even led to an opening of the pulp cavities resulting in alveolar abscesses. Due to the infiltration of germs through the opened tooth canal, inflammatory processes and abscess cavities can occur and spill over to adjacent maxillary sinuses. Apical abscesses can be found on the upper and lower jaw of the senile man from FH grave 300 (Fig. 2D), a maxillary sinusitis in the right sinus of the adult woman from FH grave 817 (Fig. 3B). In addition to these 'normal' traces of attrition, special, artificial dental wear is present on the teeth of the anterior region of some individuals from FH. Observable were fine to medium grooved abrasions (e.g., first premolar of the adult/mature male from FH grave 1094, Fig. 2D), nearly curved (groove-shaped) abrasions (e.g., on the incisal edges of the first incisor of the adult female from FH grave 817, Fig. 2A; 2B), an obliquely lingual abrasion (e.g., adult male from FH grave 295, Fig. 1A) or an obliquely buccal abrasion (e.g., adult female from FH grave 590/1).

These artificial dental attrition patterns indicate that the teeth were used as a 'third hand' or 'tool' for e.g., tearing meat, crushing bones, processing leather and plant fibers, or wool carding – and is observed as a habitual behavior of humans throughout history (Mower 1999; Schulz 1977; Scott 1997). Special groove like attritions are developed due to manipulating with threadlike items such as grasses, sinew, or feathers (i.e., the male individual from FH grave 1094, Fig. 2D).

In the case of this adult man, his particular dental attrition could be related to a distinct profession, which is indicated by several specific activity patterns. Enlarged joint surfaces (especially the lateral articular surface) on the caput of the right first metacarpal bone, strong oversteering signs on the fingers (Fig. 6B) as well as pronounced or sometimes ossified attachment sites of tendons, ligaments, or joint capsules throughout the postcranium (including a massive ligamentous intertrochanteric line on the femora, ribs with ossified cartilage insertion sites and vertebrae with ossified ligaments, Fig. 5B) indicate extreme overuse and can be interpreted as certain activity patterns. The lip-like extensions of the articular surfaces of the femoral head towards the anterior femoral neck (Poirier facies, Fig. 5A) as well as the strongly developed attachment sites of the anterior thigh muscles may point to horse riding as a specific activity pattern. The enlarged joint surfaces of the right first metacarpal bone as well as strong oversteering signs on the fingers and in the shoulder girdle may point to archery activity. These specific enthesal changes (for horse-riding and archery) together with the old healed injuries and arrowheads in the archaeological burial inventory could classify this man as a warrior, in particular as a 'mounted archer' (Novotny *et al.* 2014).

The skeletal remains of the adult man from FH grave 373 show an enlarged lateral articular surface on the caput of the right first metacarpal bone (Fig. 6A) as further evidence of archery activity and reinforced muscle attachments on the pelvis and femora as evidence of riding activity. The archaeological grave inventory contained also arrowheads. Additionally the open vertebral arch of the fifth lumbar vertebra (spondylolysis, Fig. 5C) indicates a strong overuse during adolescence and may have been caused by lifting, pulling, and moving very heavy objects. Together with an old healed fracture of the left hand (first metacarpal, Fig. 6A) these patterns could be interpreted as occupational stress markers for a 'weaponry life'.

Other signs of a 'belligerent life' are present on the skeletal remains of the adult man from FH grave 295. A body height of approximately 174 cm, a specific weaponry archaeological grave inventory of shield, sword, and spearheads, as well as several musculoskeletal marker patterns like spondylosis and spondylarthrosis deformans on the spine, stronger enthesal changes on the long bones, but also strong periosteal striation in the shaft area of the tibiae, indicate again a hardworking, warrior-like life with greater physical stress including carrying heavy objects and long marching.

Degenerative changes as signs of a life spent at hard work everyday are observed with the adult woman from FH grave 590. Lytic lesions on the plates of the lower thoracic and upper lumbar vertebrae (Schmorl nodes), severe sclerotic changes, and new bone formations on vertebral bodies in the entire thoracic-lumbar area (osteochondrosis), as well as severe arthritic changes in the right hand, indicate heavy physical activities from childhood to adolescence.

Various **anatomical variations** like the early suture closure (all 3 individuals from Walpersdorf), the aplasia of molars (Walpersdorf grave 4 and 6, FH grave 590 and 817), the occurrence of Carrabelle tubercle (Walpersdorf grave 6 and 8), as well as the occurrence of ossiculae lambdoidea (FH grave 590 and 814/1), are present in both populations and could be genetically determined (Berry/Berry 1967; Thayer/Non 2015). Therefore, this could point to a kinship of some individuals and should be investigated with more individuals of these populations. Additional biomolecular analyses of ancient DNA will provide more precise and essential information for genealogical studies including family relations and ancestry.

An intravital traumatic injury was present on the cranium of the mature/senile man from FH grave 300 as a healed defect on the upper margin of the left orbit. The surrounding bone areas, the left and right sinus frontalis, and the anterior cranial fossa displayed severe, but healed inflammatory changes as remodelled bone alterations (Fig. 3A).

Further intravital healed traumatic injuries were observed on the right frontal bone of the adult male of FH 1094 as an old healed impression fracture (2.5 x 2 cm), on the caput of the first left metacarpal of the adult man from FH 373 (Fig. 6A) and on some ribs with serrated new bone formations as signs of healed injuries at the skeletal remains of the adult man from FH 1094.

Of particular interest with evidence to **perimortem intentional violence** are the skeletal remains from the two double burials FH grave 590 (with the skeletal remains of an adult woman and her unborn child (foetus 7.5–8 lunar months, Fig. 7B) and FH grave 814 (with the skeletal remains of 2 children aged 9–11 and 4–5 years).

Due to the size and stage of development of the foetus and the location of the foetal skeletal remains in the female pelvic region, this mother and her unborn child may be victims of a tragic lethal birth process. However, the evidence of specific blunt force traumas on the occipital bone as well as specific trauma lines and edges at the first and second cervical vertebrae could be associated with intentional violence resulting in death, but it can also point to an accident before or during delivery.

Possible signs of perimortem intentional violence can be found on the cranial and postcranial remains of the children from FH grave 814. Triangular traumatic defects with additional fracture lines radiating from the area of impact at the occipital bones of both children (Fig. 8A), characteristic internal bevelling and chipping at the nuchal region and sharp trauma patterns around the foramen magnum (Fig. 8B) of the older child as well as another trauma at the left parietal bone of the younger child are related to cranial perimortem blunt force traumas. On top of these cranial traumas, the left ulna of the older child shows two questionable perimortem incision marks in the proximal joint area (Fig. 8C). Traumas can often be explained as an accident. However, the placements and patterns of the cranial traumatic injuries of all three affected individuals are typical for perimortem intentional violence and raise the question of physical abuse with an (intentional) violent death of both children and the female with the unborn child.

CONCLUSION

Although only a few individuals were examined in this anthropological survey, the sample of individuals from the La Tène Period cemeteries Walpersdorf (Industriegelände Inzersdorf-Getzersdorf, Akte 326/1997) and Franzhausen Mitte (Akte 374/1987–1993) reveal remarkable cases of (chronic) diseases, artificial dental attritions, particular activity patterns, and perimortem traumatic injuries. Further studies and detailed investigations should be considered on the entirety of the Walpersdorf and Franzhausen Mitte populations to learn more about their lives and deaths. In particular, both double-burials – grave FH 590 with an adult woman and her unborn child with evidence of perimortem traumatic injuries and grave FH 814 with two children buried with special fibulae in the associated grave goods (see description grave 814 by P. Rams) and with severe pathological conditions and perimortem traumatic injuries as well as postcranial incisions – are exceptional and require further anthropological investigation and reflection.

LITERATURE

- Bach 1965 H. Bach: Zur Berechnung der Körperhöhe aus den langen Gliedmaßenknochen weiblicher Skelette. *Anthropologischer Anzeiger* 29, 1965, 12–21.
- Barlow 1895 T. Barlow: Der infantile Skorbut und seine Beziehung zur Rachitis. *Zentralblatt Innere Medizin* 16, 1895, 505–529.
- Berry/Berry 1967 A. C. Berry/R. J. Berry: Epigenetic variation in the human cranium. *Journal Anatomy* 101 (2), 1967, 361–379.
- Brooks/Suchey 1990 S. Brooks/J. Suchey: Skeletal age determination based on the os pubis. A comparison of the Ascádi-Nemeskéri and Suchey-Brooks methods. *Human Evolution* 5/3, 1990, 227–238.
- Bruzek 2002 J. Bruzek: A method for Visual Determination of Sex Using the Human Hip Bone. *American Journal of Physical Anthropology* 117, 2002, 157–168.
- Breitinger 1937 E. Breitinger: Zur Berechnung der Körperhöhe aus den langen Gliedmaßenknochen. *Anthropologischer Anzeiger* 14, 1937, 249–274.
- Ferembach/Schwidetzky/Stloukal 1979 D. Ferembach/I. Schwidetzky/M. Stloukal: Empfehlungen für die Alters- und Geschlechtsdiagnose am Skelett. *Homo* 30, 1979, 1–32.
- Gerold 2002 F. Gerold: Anthropologische Auswertung der latènezeitlichen Skelettreste des Gräberfeldes Pottenbrunn (NÖ) unter besonderer Berücksichtigung der krankhaften und degenerativen Veränderungen. In: P. C. Rams 2002: *Das eisenzeitliche Gräberfeld von Pottenbrunn, SG St. Pölten. Niederösterreich. Forschungsansätze zu wirtschaftlichen Grundlagen und sozialen Strukturen der latènezeitlichen Einwohner des Traisentalen*. Fundberichte Österreichs, Materialheft A11, 2002, 303–336.
- Grupe/Harbeck/McGlynn 2015 G. Grupe/M. Harbeck/G. C. McGlynn: *Prähistorische Anthropologie*. Berlin–Heidelberg 2015.
- Lewis 2004 M. E. Lewis: Endocranial lesions in non-adult skeletons understanding their aetiology. *International Journal of Osteoarchaeology* 14/2, 2004, 82–97.
- Miles 1963 A. E. W. Miles: The dentition in the assessment of individual age in skeletal material. In: D. R. Brothwell (Hrsg.): *Dental Anthropology*. Symposium Society Study Human Biology 5, 1963, 191–209.
- Möller 1859 W. Möller: Akute Rachitis. *Königsberger medizinisches Jahrbuch* 1, 1859, 374–384.
- Mower 1999 J. P. Mower: Deliberate ante-mortem dental modification and its implication in archaeology, ethnography and anthropology. *Papers from the Institute of Archaeology* 10, 1999, 37–53.

- Nemeskéri/Harsányi 1959 J. Nemeskéri/L. Harsányi: Die Bedeutung paläopathologischer Untersuchungen für die historische Anthropologie. *Homo* 10, 1959, 203–226.
- Nemeskéri/Harsányi/Ascádi 1960 J. Nemeskéri/L. Harsányi/G. Ascádi: Methoden zur Diagnose des Lebensalters von Skelettfunden. *Anthropologischer Anzeiger* 24, 1960, 70–95.
- Neugebauer 1992 J. W. Neugebauer: *Die Kelten im Osten Österreichs*. Wissenschaftliche Schriftenreihe Niederösterreich 92/93/94, St. Pölten 1992.
- Novotny/Ramsl/Teschler-Nicola 2012 F. Novotny/P. C. Ramsl/M. Teschler-Nicola: Celtic identities. Living conditions, social differences and biological relations in Celtic Society in the Traisen Valley (Lower Austria). Abstract und Poster. *19th European Meeting of the Paleopathology Association*, Lille, 27–29 August 2012.
- Novotny/Spannagl-Steiner/Teschler-Nicola 2014 F. Novotny/M. Spannagl-Steiner/M. Teschler-Nicola: Anthropologische Analyse der menschlichen Skelette aus Gobelsburg, Niederösterreich. *Archaeologia Austriaca* 97–98/2013–2014, 141–153.
- Novotny in prep. F. Novotny: Die Kelten im Traisental. Anthropologische Untersuchung verschiedener latènezeitlicher Populationen im selben Lebensraum.
- Ramsl 2002 P. C. Ramsl: *Das eisenzeitliche Gräberfeld von Pottenbrunn, SG St. Pölten. Niederösterreich. Forschungsansätze zu wirtschaftlichen Grundlagen und sozialen Strukturen der latènezeitlichen Einwohner des Traisentales*. Fundberichte aus Österreich Materialheft A11. Horn 2002.
- Renhart 1992 S. Renhart: Die frühen Kelten aus der Sicht der Anthropologie. In: J. W. Neugebauer (Hrsg.): *Die Kelten im Osten Österreichs*. Wissenschaftliche Schriftenreihe Niederösterreich. Wien 1992, 131–139.
- Renhart 1996 S. Renhart: Zur Anthropologie der Kelten. Die frühlatènezeitlichen Gräberfelder von Inzersdorf, Ossarn, Herzogenburg-Süd, und Franzhausen (NÖ). In: E. Jerem/A. Krenn-Leeb/J.-W. Neugebauer/O. H. Urban (Hrsg.): *Die Kelten in den Alpen und an der Donau*. Akten des internationalen Symposiums St. Pölten, 14.–18. Oktober 1992. Wien – Budapest 1996, 179–192.
- Rösing 1977 F. Rösing: Methoden der Aussagemöglichkeiten der anthropologischen Leichenbrandbearbeitung. *Archäologie und Naturwissenschaften* 1, 1977, 53–80.
- Schulz 1977 P. D. Schulz: Task activity and anterior tooth grooving in prehistoric Californian Indians. *American Journal of Physical Anthropology* 46, 1977, 87–92.
- Schultz 1989 M. Schultz: Erkrankungen des Kindesalters bei der frühbronzezeitlichen Population von Hainburg, Niederösterreich. *Mitteilungen Anthropologische Gesellschaft Wien* 118/119, 1989, 387–398.
- Schultz 1993 M. Schultz: *Spuren unspezifischer Entzündungen an prähistorischen und historischen Schädeln. Ein Beitrag zur Paläopathologie*. Anthropologische Beiträge Bände 4A und 4B. Aesch 1993.
- Scott 1997 G. R. Scott: Dental Anthropology. *Encyclopaedia of Human Biology*. Second Edition 3, 1997, 175–190.
- Stloukal/Vyhnánek/Rösing 1970 M. Stloukal/L. Vyhnánek/F. Rösing: Spondylosehäufigkeit bei mittelalterlichen Populationen. *Homo* 24, 1970, 46–53.
- Stloukal/Vyhnánek 1975 M. Stloukal/L. Vyhnánek: Die Arthrose der großen Gelenke. *Homo* 26, 1975, 21–135.
- Stloukal/Hanáková 1978 M. Stloukal/H. Hanáková: Die Länge der Längsknochen altslawischer Bevölkerungen. Unter besonderer Berücksichtigung von Wachstumsfragen. *Homo* 29, 1978, 53–69.
- Stuart-Macadam 1987 P. Stuart-Macadam: Porotic hyperostosis: new evidence to support the anaemia theory. *American Journal of Physical Anthropology* 74 (4), 1987, 521–526.
- Stuart-Macadam 1992 P. Stuart-Macadam: Porotic hyperostosis: a new perspective. *American Journal of Physical Anthropology* 87 (1), 1992, 39–47.
- Stuart-Macadam/Kent 1992 P. Stuart-Macadam/S. Kent: *Diet, Demography, and Disease: Changing Perspectives on Anemia*. Aldine, Chicago 1992.

- Szilvássy 1978
J. Szilvássy: Eine Methode zur Altersbestimmung mit Hilfe der sternalen Gelenksflächen der Schlüsselbeine. *Mitteilungen Anthropologische Gesellschaft Wien* 108, 1978, 166–168.
- Thayer/Non 2015
Z. M. Thayer/A. L. Non: Anthropology Meets Epigenetics. Current and Future Directions. *American Anthropologist* 117 (4), 2015, 722–735.
- Todd 1920
T. W. Todd: Age change in the pubic bone I. The male white pubis. *American Journal of Physical Anthropology* 3, 1920, 285–334.
- Ubelaker 1978
D. H. Ubelaker: *Human Skeletal Remains. Excavation, Analysis, Interpretation*. Aldine, Chicago 1979.

REPORT ON GENETIC ANALYSES OF IRON AGE SAMPLES FROM SLOVAKIA

Joscha Gretzinger – Stephan Schiffels

INTRODUCTION

Genetic analyses of archaeological skeletal human remains have become routine thanks to next generation sequencing methodology, which allows us to analyze hundreds of millions of short DNA fragments in parallel. We obtained genetic data from 8 of 9 analyzed individuals from three archaeological sites in Slovakia (Palárikovo, Chotín, and Dubník), dating to the La Tène period. These analyses allowed us to confidently obtain the genetic sex of the 8 successful samples, as well as to identify preliminary ancestry information for two of the analyzed samples.

SAMPLE OVERVIEW

The following table shows a summary of the data, including individual CHT002 for which extremely few human DNA molecules could be found, and thus we did not analyze this individual further. The column 'Unique mapped reads' gives the number of sequenced DNA molecules that map to the human genome, i.e., which are likely of human origin. The endogenous DNA% indicates the fraction of human reads in the total DNA sample.

Table 1. Summary of the genetic analyses data.

Sample Name	Pandora ID	Sequenced reads	Unique mapped reads	Endogenous DNA (%)	AVG Cov NT	Damage first base 5'	Molecular Sex
I-2877 12/71	CHT001	6004618	282888	7.21	0.0046	0.18	male
I-2907 30/72	CHT002	4905954	874	0.04	0	0.15	unassigned
24/83	DUB001	6276704	677669	16.78	0.0106	0.16	male
73/72	PAL001	6368302	3173262	76.42	0.0562	0.14	male
53/71	PAL002	5080732	2203866	69.08	0.0369	0.18	female
5/70	PAL003	5105819	547189	16.87	0.008	0.15	male
70/72	PAL004	5394002	1382497	45.07	0.0195	0.17	male
58/72	PAL005	6167315	91183	2.41	0.0015	0.13	female
18/70	PAL006	7158739	372547	8.05	0.0055	0.17	male

Sample processing and sequencing

There are two established approaches to sampling the human petrous bone (pars petrosa) for DNA: Cutting the bone and drilling into the inside, or drilling into the bone from the outside. In this project, we have chosen the method of drilling from the outside, which is less invasive, but can sometimes lead to a lower yield of DNA or higher contamination. Figure 1 illustrates the two approaches before and after sampling.

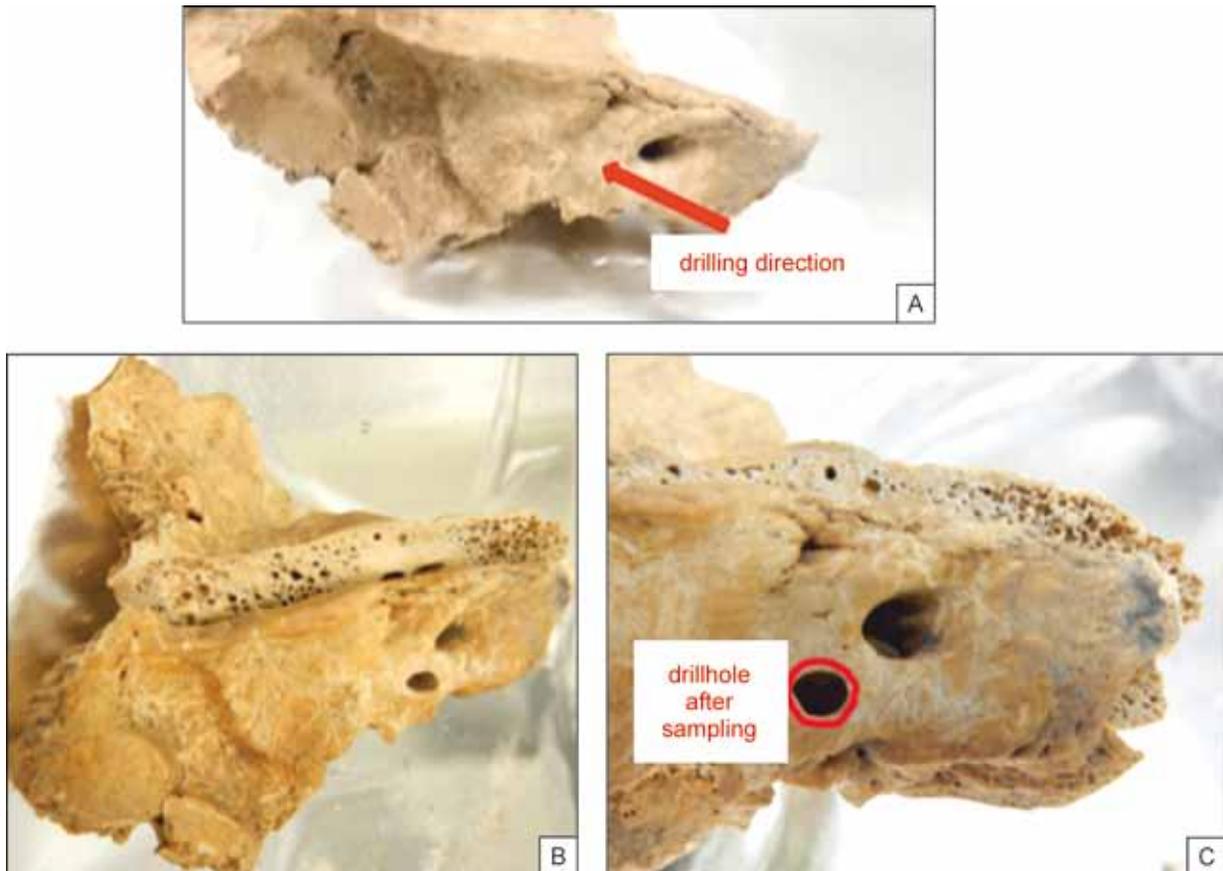


Fig. 1. Sampling the petrous bone for DNA. A – petrous bone before sampling; B – Petrous bone after sampling, and cut in half; C – Similar as in B but with marked drill hole. For illustrative purposes, images B and C show both the invasive and the non-invasive sampling procedures. The bones shown are not from the specimens analyzed here. Images kindly provided by Marie Himmel, MPI-SHH.

DNA from 9 samples from Chotín, Palárikovo, and Dubník was extracted in the ancient DNA facilities of the Max Planck Institute for the Science of Human History (MPI-SHH) in Jena, Germany. For each specimen, ~50 mg of dentine powder was used for an extraction procedure specifically designed for ancient DNA retrieval (Dabney *et al.* 2013). Extraction buffer containing 0.45 M EDTA, pH 8.0 (Life Technologies) and 0.25 mg/ml Proteinase K (Sigma-Aldrich) was added to the bone powder and incubated at 37 °C with rotation overnight. The supernatant was separated from the pellet of bone powder by centrifugation (14,000 rpm). A binding buffer consisting of 5 M GuHCL (Sigma Aldrich) and 40% Isopropanol (Merck), together with 400 µl of 1 M sodium acetate (pH 5.5) was added to the supernatant, and the solution purified by spinning it through a purification column attached to a High Pure Extender Assembly funnel (8 min in 1500 rpm, with slow acceleration). The column was then spun into a collection tube (1 min 14,000 rpm) 1–2 times to maximize the yield. This was followed by two subsequent washing steps of 450 µl of wash buffer (High Pure Viral Nucleic Acid Large Volume Kit) and two dry spin steps of 1 min centrifugation at 14,000 rpm. The final total volume of 100 µl eluate was reached by two separate elution rounds of 50 µl of TET (10 mM Tris-HCL, 1 mM EDTA pH 8.0, 0.1% Tween20), each spun for 1 min at 14,000 rpm into a fresh Eppendorf 1.5 ml tube. Negative controls (buffer instead of sample) were processed in parallel at a ratio of 1 control per 7 samples.

Of the 100 µl extract, 20 µl was used to immortalize the sample DNA as a double-stranded library. The procedure included a blunt-end repair, adapter ligation, and adapter fill-in steps, as described by Meyer and Kircher (Meyer/Kircher 2010). During the blunt-end repair step, a mixture of 0.4 U/µl T4 PNK (polynucleotide kinase) and 0.024 U/µl T4 DNA polymerase, 1× NEB buffer 2 (NEB), 100 µM dNTP mix (Thermo Scientific), 1 mM ATP (NEB) and 0.8 mg/ml BSA (NEB) was added to the template DNA, followed by incubation in a thermocycler (15 min 15 °C, 15 min 25 °C) and purification with a MinElute kit (QIAGEN). The

product was eluted in 18 μ l TET buffer. The adapter ligation step included a mixture of 1 \times Quick Ligase Buffer (NEB), 250 nM Illumina Adapters (Sigma-Aldrich) and 0.125 U/ μ l Quick Ligase (NEB), added to the 18 μ l eluate, followed by a 20 min incubation, and second purification step with MinElute columns, this time in 20 μ l eluate. For the fill-in step, a mixture of 0.4 U/ μ l Bst-polymerase and 125 μ M dNTP mix was added and the mixture then incubated in a thermocycler (30 min 37 $^{\circ}$ C, 10 min 80 $^{\circ}$ C). To introduce the UDG-half treatment, an initial stage was included in the library preparation, in which 250 U USER enzyme (NEB) was added into the 20 μ l of extract, followed by an incubation at 37 $^{\circ}$ C for 30 min, and then 12 $^{\circ}$ C for 1 min. This again was followed by the addition of 200 U UGI (Uracil Glycosylase inhibitor, by NEB) and another identical incubation to stop the enzymatic excision of deaminated sites, as described in (Rohland *et al.* 2015). For each library, a unique pair of eight-bp-long indexes was incorporated using a Pfu Turbo CxHotstart DNA Polymerase and a thermocycling program with the temperature profile as follows: initial denaturation (98 $^{\circ}$ C for 30 sec), cycle of denaturation/annealing/ elongation (98 $^{\circ}$ C for 10 sec/ 60 $^{\circ}$ C for 20 sec/ 72 $^{\circ}$ C for 20 sec) and final extension at 72 $^{\circ}$ C for 10 min (Kircher/Sawyer/Meyer 2012). Bone powder from a cave bear was processed in parallel serving as a positive control. Negative controls for both extraction and library preparation stages were kept alongside the samples throughout the entire workflow.

Experiment efficiency was ensured by quantifying the concentration of the libraries on qPCR (Roche) using aliquots from libraries before and after indexing. The molecular copy number in pre-indexed libraries ranged from $\sim 10^8$ to $\sim 10^9$ copies/ μ l, indicating a successful library preparation, whereas the indexed libraries ranged from $\sim 10^{10}$ to $\sim 10^{12}$ copies/ μ l, stating an admissible indexing efficiency. The negative controls showed 4–5 orders of magnitude lower concentration than the samples, indicating low contamination levels from the laboratory processing stages.

The libraries were amplified with PCR, for the amount of cycles corresponding to the concentrations of the indexed libraries, using AccuPrimePfx polymerase (5 μ l of library template, 2 U AccuPrimePfx DNA polymerase by Invitrogen, 1 U of readymade 10 \times PCR mastermix, and 0.3 μ M of primers IS5 and IS6, for each 100 μ l reaction) with thermal profile of 2 min denaturation at 95 $^{\circ}$ C, 3–9 cycles consisting of 15 sec denaturation at 95 $^{\circ}$ C, 30 sec annealing at 60 $^{\circ}$ C, 2 min elongation at 68 $^{\circ}$ C and 5 min elongation at 68 $^{\circ}$ C. The amplified libraries were purified using MinElute spin columns with the standard protocol provided by the manufacturer (Qiagen), and quantified for sequencing using an Agilent 2100 Bioanalyzer DNA 1000 chip.

We used EAGER (Peltzer *et al.* 2016; version 1.92.50) to process the sequenced reads, using default parameters (see below) for human-originated, UDG-half treated, single-end sequencing data. Specifically, AdapterRemoval was used to trim the sequencing adapters from our reads, with a minimum overlap of 1 bp, and using a minimum base quality of 20 and minimum sequence length of 30 bp. BWA aln (version 0.7.12-r1039, <https://sourceforge.net/projects/bio-bwa/files>). Li/Durbin (2009) was used to map the reads to the GRCh37 hg19 human reference sequence, with a seed length (-l) of 32, max number of differences (-n) of 0.01 while applying a quality filter (-q) of 30. Duplicate removal was carried out using DeDup v0.12.1. Terminal base deamination damage calculation was done using mapDamage, specifying a length (-l) of 100 bp.

For downstream analyses, we used bamutil (version 1.0.13, <https://github.com/statgen/bamUtil.git>) TrimBam to trim two bases at the start and end of all reads. This procedure eliminates the positions that are affected by deamination, thus removing genotyping errors that could arise due to ancient DNA damage.

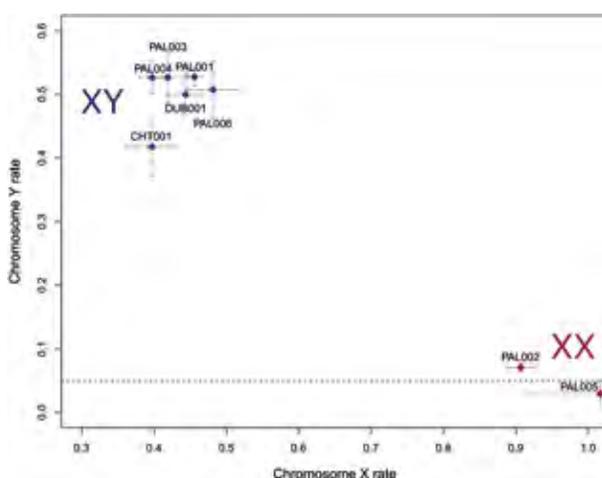


Fig. 2. Illustration of coverage on the X and Y chromosome. Shown are relative genomic coverages of the sex chromosomes relative to the autosomes. In males, we expect both the X and the Y relative coverage at 1/2 of the autosomes. In females, we expect Y coverage to be close to zero, and the X coverage to be around the same as that for the autosomes.

GENETIC SEX DETERMINATION

We used the short-read alignments to the human genome to measure mean coverage on the X and Y chromosomes, relative to the autosomes. Since male individuals have one Y and

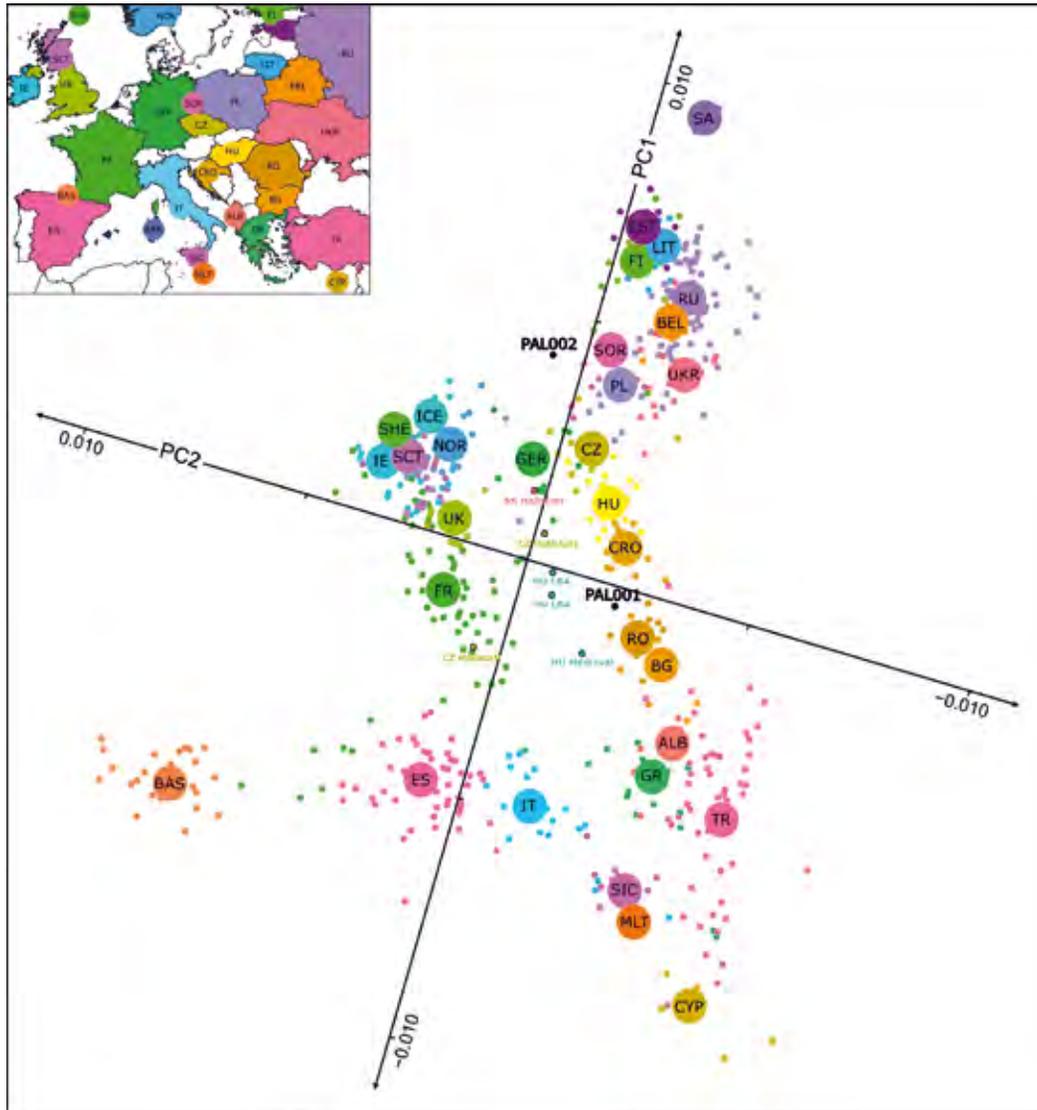


Fig. 3. Principal components analysis with 623 published modern European samples (Lazaridis et al. 2014) and several other published ancient individuals (Damgaard et al. 2018; Gamba et al. 2014; Mathieson et al. 2015).

one X chromosome, but two of each autosome, we expect both X and Y to have relative genomic coverage of $\frac{1}{2}$. In contrast, females have two copies of the X chromosome, and no Y chromosome, so their relative coverage on X should be 1 (relative to autosomes) and 0 on the Y (Fig. 2).

With the exception of CHT002, which failed and produced not enough human DNA, we indeed find two clusters of samples, with only two female samples (PAL002 and PAL005) and all other samples being male.

PRELIMINARY ANCESTRY ANALYSIS

We used Principal Components Analysis to analyze the ancestry of the two best preserved individuals. We first computed principal components of 623 modern European samples from 37 populations (Lazaridis et al. 2014), and then projected the genetic data from PAL001 and PAL002 onto those principal components (Fig. 3). The analysis reveals some heterogeneity of the two individuals, with PAL001 falling more towards the south/southeast, clustering together with present-day Romanians and Croats, whereas PAL002 clusters with present-day Sorbian and Polish people.

OUTLOOK AND CONCLUSION

DNA Preservation in the three analyzed sites was remarkably good. We could successfully retrieve human DNA, reaching up to 60% in PAL001, from all but one individual. This proved sufficient for accurate determination of the genetic sex of the successful eight sample. At this stage, only small fractions of the human genomes of these individuals were reconstructed, and deeper shotgun sequencing, or application of Capture Enrichment technology (Haak *et al.* 2015; Mathieson *et al.* 2015), to retrieve the complete genomes of these individuals, which reveal fine-scale population ancestry of all samples. At this point, we could however already obtain ancestry estimates for two of the eight successful samples, which revealed an overall Central European ancestry, with some difference between the two, spanning from Polish/Sorb genetic ancestry towards more southern Croatian or Romanian ancestry. Deeper sequencing will reveal whether this difference reflects a single outlier, or a general pattern of heterogeneity in these three Iron Age populations.

LITERATURE

- Dabney *et al.* 2013 J. Dabney/M. Knapp/I. Glocke/M.-T. Gansauge/A. Weihmann/B. Nickel/C. Valdiosera, et al.: "Complete Mitochondrial Genome Sequence of a Middle Pleistocene Cave Bear Reconstructed from Ultrashort DNA Fragments." *Proceedings of the National Academy of Sciences of the United States of America* 110 (39), 2013, 15758–63.
- Damgaard *et al.* 2018 P. de Barros Damgaard/N. Marchi/S. Rasmussen/M. Peyrot/G. Renaud/Th. Korneliussen/J. V. Moreno-Mayar et al.: "137 Ancient Human Genomes from across the Eurasian Steppes." *Nature* 557 (7705), 2018, 369–374.
- Gamba *et al.* 2014 C. Gamba/E. R. Jones/M. D. Teasdale/R. L. McLaughlin/G. Gonzalez-Fortes/V. Mattiangeli/L. Domboróczy et al.: "Genome Flux and Stasis in a Five Millennium Transect of European Prehistory." *Nature Communications* 5 (October) 2014, 5257.
- Haak *et al.* 2015 W. Haak/I. Lazaridis/N. Patterson/N. Rohland/S. Mallick/B. Llamas/G. Brandt et al.: "Massive Migration from the Steppe Was a Source for Indo-European Languages in Europe." *Nature* 522 (7555), 2015, 207–211.
- Kircher/Sawyer/Meyer 2012 M. Kircher/S. Sawyer/M. Meyer: "Double Indexing Overcomes Inaccuracies in Multiplex Sequencing on the Illumina Platform." *Nucleic Acids Research* 40 (1), 2012, e3.
- Lazaridis *et al.* 2014 I. Lazaridis/N. Patterson/A. Mittnik/G. Renaud/S. Mallick/K. Kirsanow/P. H. Sudmant et al.: "Ancient Human Genomes Suggest Three Ancestral Populations for Present-Day Europeans." *Nature* 513 (7518), 2014, 409–413.
- Li/Durbin 2009 H. Li/R. Durbin: "Fast and Accurate Short Read Alignment with Burrows-Wheeler Transform." *Bioinformatics* 25 (14), 2009, 1754–1760.
- Mathieson *et al.* 2015 I. Mathieson/I. Lazaridis/N. Rohland/S. Mallick/N. Patterson/S. Alpaslan Roodenberg/E. Harney et al.: "Genome-Wide Patterns of Selection in 230 Ancient Eurasians." *Nature*, November 2015. <http://www.nature.com/doi/10.1038/nature16152>.
- Meyer/Kircher 2010 M. Meyer/M. Kircher: "Illumina Sequencing Library Preparation for Highly Multiplexed Target Capture and Sequencing." *Cold Spring Harbor Protocols* 2010 (6), 2010, db. prot 5448.
- Peltzer *et al.* 2016 A. Peltzer/G. Jäger/A. Herbig/A. Seitz/Ch. Knip/J. Krause/K. Nieselt: "EAGER: Efficient Ancient Genome Reconstruction." *Genome Biology* 17 (1), 2016, 416.
- Rohland *et al.* 2015 N. Rohland/E. Harney/S. Mallick/S. Nordenfelt/D. Reich: "Partial Uracil-DNA-Glycosylase Treatment for Screening of Ancient DNA." *Philosophical Transactions of the Royal Society of London. Series B, Biological Sciences* 370 (1660), 2015, 20130624.

AUTHORS' ADDRESSES

Privatdozent Mag. Dr. Peter C. Ramsel
Archeologický ústav SAV
Akademická 2
SK – 949 21 Nitra

Currently:

Institut für Urgeschichte und Historische Archäologie
Universität Wien
Franz-Klein-Gasse 1
AT – 1190 Wien
peter.ramsel@univie.ac.at

Mag. Friederike Novotny
Anthropologische Abteilung
Naturhistorisches Museum Wien
Burgring 7
AT – 1010 Wien
friederike.novotny@nhm-wien.ac.at

Joscha Gretzinger
Max-Planck-Institut für Menschheitsgeschichte
Abteilung Archäogenetik
Kahlaische Str. 10
D – 077 45 Jena
gretzinger@shh.mpg.de

Stephan Schiffels
Max-Planck-Institut für Menschheitsgeschichte
Abteilung Archäogenetik
Kahlaische Str. 10
D – 077 45 Jena
schiffels@shh.mpg.de