

Beiträge zur Vor- und Frühgeschichte der Iberischen Halbinsel und Mitteleuropas

Studien in honorem Philine Kalb

On Pre- and Earlier History of Iberia and Central Europe

Studies in honour of Philine Kalb

herausgegeben von

Tanya Armbruester
Morten Hegewisch

STUDIEN ZUR ARCHÄOLOGIE EUROPAS 11

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und Mitteleuropas
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Studien zur Archäologie Europas

Band 11

herausgegeben von
Joachim Henning, Achim Leube
und Felix Biermann



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VORWORT DER HERAUSGEBER

Die Reihe „Studien zur Archäologie Europas“ im Verlag Dr. Rudolf Habelt GmbH ist 2006 mit dem Ziel aus der Taufe gehoben worden, die zuvor im Rahmen der „Universitätsforschungen zur Prähistorischen Archäologie (UPA)“ organisierte und vorrangig auf Themen der germanischen und slawischen Archäologie gerichtete Frankfurter und Berliner Herausgebertätigkeit nunmehr auf die europäische Vor- und Frühgeschichte insgesamt auszuweiten. Mit gleicher Intention wurde der Kreis der Herausgeber erweitert. Während die ältere UPA-Vorläuferreihe mit Band 8 endete, liegen die Bandzahlen der neuen SAE-Reihe nun bereits in der zweiten Dekurie.

Die SAE-Reihe hat auch die Begrenzung auf Hochschulschriften (bisher zumeist Dissertationen) aufgegeben. Ergebnisse von Forschungsprojekten, Tagungsveranstaltungen usw. werden in gleicher Weise wie die auch weiterhin vertretenen Hochschularbeiten berücksichtigt. Außerdem bleibt es ein besonderes Anliegen, den Diskurs mit den Archäologien des östlichen Mitteleuropa, Osteuropa und Südosteuropa besonders zu fördern. Die Herausgeber haben angesichts dieser Zielrichtungen der Reihe mit dem Verlag vereinbart, bei ihrer Arbeit mit einem kleinen wissenschaftlichen Beirat zusammenzuarbeiten.

Den vorliegenden Studienband zum vierzigsten Dienstjubiläum von Dr. Philine Kalb, der langjährigen Forscherin der iberischen Megalithik an der Außenstelle des Deutschen Archäologischen Instituts in Lissabon, haben die Herausgeber gerne in das Reihenprogramm aufgenommen. Mit seiner großen internationalen Breite der enthaltenen Beiträge passt er sehr gut in die neue europäische Orientierung der Serie. Den einleitenden Worten von Tanya Armbruster und Morten Hegewisch ist hier nichts Substantielles hinzuzufügen, höchstens ein Lob dafür, dass sie ihr Vorwort tatsächlich passgenau für das Jahr des Dienstjubiläums abfassen konnten, während kleinere Nacharbeiten an den Texten des Sammelbandes den Erscheinungstermin noch um wenige Monate verschoben haben – in das Folgejahr nämlich, das nun aber auch ein rundes Lebensjahr der Geehrten ist. So kann man gewiss sein, dass die Publikation gleichzeitig zu einer würdigen Geburtstagsgabe wird.

Den guten Wünschen schließen sich die Herausgeber der Reihe an. Sie danken allen, die Anteil am Erscheinen dieser Publikation haben.

Frankfurt am Main/Berlin, Februar 2010

Joachim Henning · Achim Leube · Felix Biermann

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Vorwort

Tanya Armbruester (Berlin), Morten Hegewisch (Berlin) & Nicola Lignitz (Berlin)

Seit Freitag, den 11.07.1969, – jenem Tag, an dem Philine Kalb ihre Promotion im Fach Ur- und Frühgeschichte an der Albert-Ludwigs-Universität in Freiburg/Breisgau bei Prof. Dr. Edward Sangmeister erfolgreich abschloss, sind vier ereignisreiche Jahrzehnte vergangen.¹ Jenes 40-jährige Dienstjubiläum war uns ein willkommener Anlass, die außergewöhnliche Wissenschaftlerin Philine Kalb mit einer besonderen Würdigung zu ehren. In diesen 40 Jahren legte die Jubilarin einen bemerkenswerten beruflichen Werdegang zurück und gelangte zu wissenschaftlicher Bedeutung auf einem Weg, der im Europa der ersten Nachkriegsjahrzehnte – insbesondere für Frauen generell – kein einfacher war.

Edward Sangmeister – als ihr einleitend angesprochener akademischer Lehrer – verstand es, zahlreiche seiner Studenten für die Erforschung der Archäologie und Geschichte der Iberischen Halbinsel zu faszinieren. So auch Philine Kalb. Dies ist für sich genommen wenig bemerkenswert. Es erforderte jedoch einen besonderen Mut, sich als junge deutsche Absolventin der Archäologie jener südwestlichen Länder zu verschreiben, die bis weit in die 1970er Jahre hinein diktatorisch regiert wurden. Den daher zwangsläufig auf vielerlei Ebenen auftretenden Schwierigkeiten stellte sich Philine Kalb zuerst am Deutschen Archäologischen Institut in der spanischen Hauptstadt Madrid sowie daran anschließend in Portugal im Zuge des Aufbaus der Außenstelle des DAI in Lissabon. Sich diesen Problemen zu stellen und sie erfolgreich zu überwinden liegt wohl zu einem guten Teil in der Biografie Philine Kalbs begründet. Geboren im Sternzeichen des Löwen erblickte sie am 18.08.1940 als Sonntagskind in Stuttgart das Licht der Welt und wuchs mit einer Schwester als Tochter einer Kriegswitwe auf. Ihre Schulzeit verbrachte sie in Esslingen am Neckar im beschaulichen Baden-Württemberg. Das Fach Latein lag ihr dabei besonders nahe, sodass sie sogar die Lehrkraft gelegentlich bei Krankheitsabwesenheit vertrat, ein Verhalten, das in der heutigen Zeit des regelhaften Lehrermangels und Unterrichtsausfalls wie ein Märchen aus ferner Vergan-

genheit klingt. Das Abitur erwarb sie 1959 in Esslingen. Es folgte ihr Studium in Tübingen, allerdings mit völlig anderen Schwerpunkten, als man dies vermuten würde: So begann sie mit der Fächerkombination Geologie, Biologie und Chemie auf Lehramt. Nach einer Beschäftigung im Stadtarchiv Esslingen während der semesterfreien Zeit erkannte Philine Kalb für sich jedoch alsbald eine andere Berufung. Im zweiten Studiensemester wechselte sie daher als Lehramtsstudentin zu Latein, Griechisch und Geschichte. Während des Grundstudiums gewann Philine Kalb – erneut in Esslingen am Neckar – erste Ausgrabungserfahrungen in der Stadtkirche St. Dionys unter der Grabungsleitung von Günther P. Fehring bei Ausgrabungen in den Jahren von 1960 bis 1963 aufgrund des Einbaus einer Heizungsanlage. Nach einer gewissen Frist und Bewährungsphase durfte sie schließlich als Grabungsleiterin tätig werden. In der Folgezeit nahm Philine Kalb an weiteren Ausgrabungen teil und löste sich dabei vollends von der Mittelalterarchäologie wie auch der schwäbischen Provinz, wie das Thema ihrer Promotion an der Albert-Ludwigs-Universität in Freiburg verrät: *Die Siedlungsarchitektur vom Cerro de la Virgen bei Orce (Provinz Granada) – Ein Beispiel kupferzeitlicher Kolonien und „altmittelländischen“ Rundbaus auf der Iberischen Halbinsel*. 1970/71 und 1971/72 schließlich war sie Reisestipendiatin des DAI und gewann unschätzbare Eindrücke in Ländern wie dem Irak, die heute für Besucher aus dem Westen – Frauen allzumal – kaum mehr ohne Gefährdung des eigenen Lebens zu bereisen sind.

*

Auf der akademischen Ebene gibt es unterschiedliche Möglichkeiten, das Wirken verdienter Kollegen zu ehren. Im vorliegenden Fall wurde nach einer kurzen Umfrage im Kreise der Freunde und Kollegen der Jubilarin die Entscheidung getroffen, das Medium einer Festschrift zu wählen. Festschriften werden in der Regel bedeutenden akademischen Lehrern von ihren Schülern gewidmet. Der berufliche Werdegang Philine Kalbs erfolgte jedoch nicht im universitären Bereich, sodass sie im engeren Sinne keine Schüler aufzuweisen hat. Dennoch gelang es ihr, als Wissenschaftlerin – insbesondere während ihrer Zeit als wissenschaftliche Referentin am Deutschen Archäologischen Institut Madrid, Außenstelle Lissabon, – inter- sowie außerinstitutionell einen nicht unerheblichen Einfluss auf Kollegen und Studenten und

¹ Für die detaillierten Informationen zum Promotionsverfahren von P. Kalb danken wir Frau R. Kirsten, Sekretariat des Instituts für Archäologische Wissenschaften der Albert-Ludwigs-Universität in Freiburg/Breisgau. Frau Kirsten hat freundlicherweise die Mühe auf sich genommen, die früheren Absolventen-Listen des Instituts zu durchsuchen. Die Nachfrage in Freiburg erwies sich als notwendig, nachdem der falsche Eintrag in: J. Filip, *Enzyklopädisches Handbuch zur Ur- und Frühgeschichte Europas*, Bd. III: Addenda, (aus dem Nachlass herausgegeben von J. Hrala). Prag 1998: 164, zur Verunsicherung geführt hatte. Im *Enzyklopädischen Handbuch* wird Tübingen fälschlich als Ort der Promotion genannt.

damit natürlich auch auf die Forschung auszuüben. Dabei übernahm sie für viele Fachkollegen, die noch am Anfang bzw. an einem entscheidenden Wendepunkt ihres wissenschaftlichen Weges standen, die Rolle einer Lehrerin und Mentorin.

Der bisherigen fachlichen Leistung Philine Kalbs ist mit wenigen Sätzen kaum gerecht zu werden. Innerhalb ihrer Interessengebiete hatte sie grundsätzlich die aktuellen Forschungstendenzen im Blick und blieb dabei offen für neue Entwicklungen in der Archäologie. So griff sie beispielsweise frühzeitig innovative und oft interdisziplinäre Ansätze auf, wie etwa den Einsatz der Geomagnetik für die Erforschung von Flächen mit unbekanntem archäologischem Potenzial. Auch die Chancen und Möglichkeiten der engeren Zusammenarbeit mit Mineralogen erkannte sie frühzeitig. Über diese Zusammenarbeit gelang es ihr beispielsweise, die Gesteine einiger iberischer Megalith-Monumente zu bestimmen und deren mehr oder minder weit entfernte ursprüngliche Herkunft zu ermitteln. Philine Kalbs Aufgeschlossenheit gegenüber dem Einsatz zukunftsweisender Methoden in der Archäologie verdankt die Forschung der Iberischen Halbinsel daher wichtige Impulse. Neben den benannten praktischen Ansätzen stellten für sie auch die Bereiche 'Theorie und Modellbildung', die anfänglich eine Domäne des englischsprachigen Raumes waren, nie Tabuthemen dar. Damit war die Jubilarin vielen Kollegen einen wichtigen Schritt voraus.

Im Hinblick auf ihre Forschungen legte Philine Kalb ihre Ergebnisse der Fachwelt immer zügig vor. Die hohe Zahl ihrer fachwissenschaftlichen Beiträge in deutscher, englischer, spanischer und portugiesischer Sprache zu unterschiedlichsten Themen spricht von ihrer großen Energie und ihrem unermüdlichen Forscherehrgeiz. Als Referentin oder DiskutantIn war sie auf wichtigen nationalen wie internationalen Tagungen ebenso häufig präsent. Entsprechend dieser aktiven vielfältigen Präsenz entstanden Zusammenarbeiten und Freundschaften auf breiter europäischer Ebene, von denen zahlreiche Wissenschaftler unterschiedlicher Fachbereiche noch immer profitieren.

Dabei beschränkte sich das Wirken Philine Kalbs von Anbeginn nicht nur auf die Archäologie. Ihre Rolle als Ansprechpartnerin – oder um es neudeutsch zu sagen: als „Netzwerkerin“ –, bedarf hier der besonderen Erwähnung. Die Außenstelle des Deutschen Archäologischen Instituts in Lissabon diente neben der Wahrnehmung rein wissenschaftlicher Aufgaben häufig als erste Anlaufstelle und „Kontaktbörse“ der Reisestipendiaten des DAI, für andere Wissenschaftler, Doktoranden, Studenten, Praktikanten und auch jene, die sich ohne wissenschaftlichen Auftrag für die archäologischen Fundplätze, Funde und Geschichte der Iberischen Halbinsel interessierten. So organisierte Philine Kalb häufig den Austausch von Studierenden, Unterbringungen, Kontakte, finanzielle Mittel, Verpflegung, Transportmittel und vieles mehr. Auf diese Weise beeinflusste sie das Leben zahlreicher

Menschen auf fachlicher und persönlicher Ebene als Mentorin, Unterstützerin und auch – bei Weitem nicht zuletzt – Freundin mit ihrer charismatischen, dabei oft unkonventionellen, stets humorvollen und leidenschaftlich entschlossenen Persönlichkeit.

Nicht anders erging es den Herausgebern dieser Festschrift: Im Jahr 2000 kam die Hauptinitiatorin dieses Bandes, Tanya Armbruester, mit viel Neugier und Enthusiasmus nach Portugal, um im Nationalmuseum für Archäologie (Museu Nacional de Arqueologia) in Lissabon für ihre geplante Dissertation über das Frühneolithikum im Westen der Iberischen Halbinsel zu recherchieren. Die Recherchen waren jedoch bereits nach kurzer Zeit aufgrund der seinerzeit von Machtkämpfen geprägten Fachsituation in Portugal auf unerwartete Probleme gestoßen. Daraufhin rieten ihr deutsche Fachkollegen, Philine Kalb in der Außenstelle des DAI in Lissabon zu kontaktieren. Die verehrte Jubilarin sah sich zu diesem Zeitpunkt allerdings gerade mit dem kürzungsbedingten Schließungsbeschluss für die Außenstelle des DAI in Lissabon konfrontiert, der nicht nur ihren Arbeitsplatz unfreiwillig zurück nach Deutschland verlegte, sondern auch auf jeder anderen Ebene eine unwillkommene Herausforderung mit drastischen Einschnitten darstellte. Obgleich die Ausgangsbedingungen in Anbetracht dessen wenig aussichtsreich erschienen, stimmte Philine Kalb einem Treffen anlässlich der im September 2000 in Lissabon stattfindenden Tagung der „European Association of Archaeologists“ zu, und es gelang, Philine Kalb für die Fragestellungen des Dissertationsvorhabens zu interessieren. Daraus entwickelte sich in der Folgezeit eine enge Zusammenarbeit, in deren Verlauf Tanya Armbruester Teile der Befunde und des Fundmaterials aus dem Forschungsprojekt von Philine Kalb und Martin Höck: „Untersuchungen an Megalithgräbern und einer kupferzeitlichen Befestigung (Monte da Ponte) in Südportugal – Erforschung der Besiedlungsgeschichte“ für ihre eigenen Untersuchungen berücksichtigen konnte, wobei der Schwerpunkt der Zusammenarbeit auf der Auswertung des Fundmaterials aus den Ausgrabungen am Megalithgrab Vale de Rodrigo 3 (Évora) lag. In der Folgezeit wurde Philine Kalb für Tanya Armbruester zu einer unverzichtbaren Mentorin und Freundin, der sie sehr viel verdankt. Vor allem die Einbindung in das Kommunikationsnetzwerk jener Archäologen, die sich in Portugal und Spanien mit den vorgeschichtlichen Perioden des Endmesolithikums, dem Neolithikum und der Kupferzeit befassen, wäre für Tanya Armbruester ohne die eigene jahrelange konstante Präsenz vor Ort niemals möglich gewesen. Die aktive persönliche Präsenz und fachliche Kompetenz, mit der Philine Kalb über Jahrzehnte auf der Iberischen Halbinsel zu einer festen Größe geworden ist, hat diesen Weg geebnet. Dabei zeigte sich nicht zuletzt, welche wichtige Rolle sie als deutsche Wissenschaftlerin für die archäologische Forschung – speziell zur Megalithik der Iberischen Halbinsel – spielte und noch immer spielt. Ihre fachlichen, zumeist auch freundschaftlichen Kontakte innerhalb Portugals, Spaniens und zu Wissenschaftlern solcher Nationen, in denen die Me-

galithik einen wichtigen Forschungsschwerpunkt darstellt, brachten den Grenzen überschreitenden Austausch auf dieser Ebene entscheidend voran.

Da der Lebens- und Forschungsmittelpunkt Philine Kalbs seit den 1970er Jahren bis zur Schließung der Außenstelle Lissabon in Portugal lag, wurde ihre wissenschaftliche Arbeit im Herkunftsland Deutschland nicht mit derselben Intensität wahrgenommen, wie es für die Iberische Halbinsel zu verzeichnen ist. Daher ist es für die Herausgeber dieser mehrsprachigen Festschrift ein besonderes Anliegen, auch im mitteleuropäischen deutschsprachigen Raum auf die Archäologin Philine Kalb, ihr berufliches Wirken und ihr fachwissenschaftliches Werk aufmerksam zu machen.

Für diese Idee fanden sich schnell zahlreiche Unterstützer, unter ihnen Morten Hegewisch, den Tanya Armbruester während ihres Studiums als Doktorand an der Humboldt-Universität zu Berlin kennengelernt hatte. Er besaß infolge seiner zahlreichen Tätigkeiten im redaktionellen Sektor jene Kenntnisse, die für die Erarbeitung einer Festschrift unabdingbar waren. Außerdem war er Philine Kalb, die inzwischen aus Portugal zur Römisch-Germanischen Kommission des Deutschen Archäologischen Instituts nach Frankfurt am Main gewechselt war, während seiner dortigen Tätigkeit in den Jahren 2001–2005 begegnet, wobei er die ältere Kollegin mit ihrer zupackenden, stets humorvollen sowie generösen Art sehr zu schätzen gelernt hatte. Als weitere Mitarbeiterin der geplanten Festschrift konnte Nicola Lignitz, Fotografin und Redaktionsmitarbeiterin am Lehrstuhl für Ur- und Frühgeschichte der Humboldt-Universität zu Berlin, gewonnen werden.

*

Die Herausgeber dieses Bandes möchten allen, die zum Entstehen der Festschrift beigetragen haben, ihren Dank aussprechen. Ein besonderer Dank gebührt den Autoren und Autorinnen, die ihre Beiträge schon früh abgeschlossen und eingereicht haben und dennoch die Geduld aufbrachten, zweieinhalb lange Jahre bis zur Veröffentlichung ihrer Artikel zu warten, die von der Planungsphase bis zur Vorlage der Festschrift letztendlich verstrichen sind.

Die Mehrzahl der Beiträge behandelt die Iberische Halbinsel. Da jedoch für die Auswahl der Autoren in erster Linie der persönliche Bezug zu Philine Kalb ausschlaggebend war, wurde auf eine geografische und zeitliche Einschränkung verzichtet. Entsprechend decken die Artikel eine breite Spanne von Themen, Zeiten und geografischen Räumen ab. Die Themen führen den Leser durch Europa und darüber hinaus, vom äußersten Westen bis weit in den Osten, vom Neolithikum bis in die Spätantike und von der Geomagnetik bis zur Ethnografie. Das Spektrum der Beiträge verdeutlicht die zahlreichen Kontakte, Interessen und die exzellente internationale Vernetzung, die das berufliche und persönliche Wirken Philine Kalbs kennzeichnet.

Das Layout lag in den Händen von Morten Hegewisch, die Redaktion der deutschsprachigen Beiträge übernahmen Morten Hegewisch und Nicola Lignitz, die redaktionelle Bearbeitung der englischsprachigen Beiträge wurde von Tanya Armbruester unter maßgeblicher Mitwirkung von Graham Salisbury geleistet. Für die Korrekturen und, in einigen Fällen, für das Erstellen der englischen Zusammenfassungen war Tanya Armbruester verantwortlich. Frau Petra Hanauska (Frankfurt am Main) sei herzlich gedankt für ihre Ratschläge zu Fragen des Layouts und Professor Joachim Henning sowie Professor Achim Leube für die Bereitschaft, die Festschrift in der von ihnen herausgegebenen Reihe „Studien zur Archäologie Europas“ aufzunehmen.

Die Fotos von Philine Kalb stellten Michael Kunst, Tanya Armbruester, Barbara Sasse und weitere Freunde und Kollegen bereit. Michael Kunst gebührt außerdem der Dank der Herausgeber, da er den Kontakt zu einzelnen der älteren britischen und iberischen Kollegen herstellte und darüber hinaus auch jederzeit gerne beratend zur Seite stand. Bei dem auf der Titelseite abgebildeten Monument handelt es sich um den Anta de Pendilhe bei Pendilhe, Villa Nova de Paiva, Portugal.¹

Wir wünschen Philine Kalb viel Freude beim Lesen der Festschrift, weiterhin gutes Gelingen für ihre Projekte, mit denen bestimmt auch nach dem Abschluss ihrer „offiziellen“ beruflichen Laufbahn niemals Langeweile aufgenommen wird, vor allem aber eine gute Gesundheit und ungebrochene Schaffenskraft!

Berlin, im Oktober 2009

Preface

Tanya Armbruester (Berlin) & Chris Scarre (Durham)

Philine Kalb graduated from Albert-Ludwigs-University at Freiburg im Breisgau on 11th July 1969. Her PhD thesis was supervised by Professor Dr Edward Sangmeister. Forty eventful years have passed since Philine's graduation. On the occasion of this jubilee we – the editors, authors and congratulants – wish to bestow a special mark of appreciation and honour on a most exceptional woman and archaeological researcher.

Edward Sangmeister had always known how to point the interest of his students toward Iberian archaeology. Under his tutelage and guidance Philine developed a strong professional ambition in, and personal affection for, the Iberian Peninsula. After receiving her PhD in archaeology Philine Kalb won the DAI travel grant (Reisestipendium des Deutschen Archäologischen Instituts) in 1970/71, and she spent the following 24 months supported by these funds on an extended circum-Mediterranean journey. Her first personal contact with the Middle East left a very deep and lasting fascination but she soon applied for a job with the DAI in Madrid (Spain). With the success of that application she became established first in Madrid, and finally in Lisbon, where the DAI had decided to build a new point of presence. The Iberian Peninsula was by no means easy territory for professional activities by foreigners during the extended post-war era of the early 1970s. Spain and Portugal at that time had only recently overcome their undemocratic political structures and it demanded plenty of courage and ambition for a young and untried female archaeologist – and a German at that – to face these challenges. True to her nature, born a Sunday child under the sign of Leo (August 18, 1940), Philine met it all head-on. Her mother, a war widow, had raised Philine and her sister during difficult times. She went to school in Esslingen (Baden-Württemberg) and became an eager pupil who soon developed a particular liking for Latin, chemistry, and biology. A successful A-level exam gained her enrolment at Tübingen University twelve years later in 1959. Although Philine had originally intended to become a teacher she later found herself fascinated with archaeology when she joined the excavation team of Günther P. Fehring as a student assistant at the excavation of the town church of St. Dionysus in Esslingen during the years 1960 to 1963. Many more excavations followed, and her increasing archaeological enthusiasm finally led her to enroll as a PhD student at Albert-Ludwigs-University in Freiburg im Breisgau, where she wrote her PhD thesis on “The settlement architecture of the site of Cerro de la Virgen near Orce, Granada province – an example of Chalcolithic colonies

and ancient Mediterranean circular houses in the Iberian peninsula” (Die Siedlungsarchitektur vom Cerro de la Virgen bei Orce, Provinz Granada – ein Beispiel kupferzeitlicher Kolonien und “altmittelländischen” Rundbaus auf der Iberischen Halbinsel).

*

There are many different ways to acknowledge a deserving academic. A festschrift (book of honour) would usually be chosen as a gift from students, both previous and present, to an appreciated academic teacher. Although Philine Kalb never became a teacher either at school or university her job as a scientific referee at the DAI brought her into touch with countless people who came to Madrid and Lisbon seeking information and guidance regarding Iberian archaeology, history, culture, and more. That made her a valued counsellor, guide, tutor, and coach for many of us, and we have therefore decided to present her with a book of honour as a mark of our profound appreciation.

A few sentences are scarcely sufficient to describe the magnitude of Philine's work over the last forty years. While her early studies in Iberian archaeology were mainly focused on the Copper and Bronze Age periods, it was Iberian megaliths that became increasingly important to her research during the late 1980s. Within her field of expertise Philine was constantly considering more inventive methods and their applicability to her research. It was through her initiative that geomagnetic prospection was applied for the first time as a means for the non-destructive investigation of megalithic sites in southern Portugal. It was also Philine who first invited mineralogists to join her in her research on megalithic architecture in the Alentejo (Portugal), to help with the determination of the materials used for the construction of the stone chambers, and to locate the quarries from which the raw materials were acquired. The data that was collected created a fundamental basis of knowledge for identifying the pattern and scale of human activities and infrastructure during the megalithic stage of the Neolithic. Those studies resulted in a more realistic picture when compared with the overwhelming majority of predominantly theory-based approaches toward the topic. Philine Kalb's approach to the Iberian megalithic tradition can be described as a constant quest to detect the ideas, motivations and individuals behind the phenomenon without relying on theory and modelling, although without ignoring them either.

Her research and her interdisciplinary collaborations have yielded important data and have inspired profound changes in perspective throughout Iberia and beyond.

Philine Kalb always was – and is – someone who freely shares the results of her research. The large number of her papers published in German, Portuguese, Spanish and English is impressive testimony to her abundant energy and the high professional ambitions which drive her. The rather sceptical perspective that her papers often adopted was merely intended to inspire further discussions and to fuel scientific progress in archaeology. As a valued participant of numerous meetings and congresses Philine became acknowledged and exceptionally well-connected within the network of European and indeed global megalithic research.

But there was always a life apart from stark professional business for Philine. Her networking covered far more than just research. The DAI office in Lisbon was the place to go for German-speaking researchers, PhD students, trainees, and others interested in the archaeology, history and culture of western Iberia. Even those who had no scientific assignment at all visited that office, and it was usually Philine Kalb who welcomed visitors, introduced them to local contacts and institutions, and helped organize funds, excursions, visits to museums and sites, accommodation, provisions, means of transport and academic exchanges. Her welcoming, warm, generous manner and charismatic personality have made Philine a beacon for many over the decades.

*

That was exactly how the initiators of this book became acquainted with Philine Kalb. In 2000, prospective PhD student Tanya Armbruster arrived in Lisbon, her baggage containing the germ of a PhD-thesis-to-be, with plenty of curiosity and energy, but little clue about the obstacles that uninvited research could encounter in foreign countries. It did not take long for her to find herself confronted by a whole avalanche of problems. When seeking advice she was told repeatedly that the DAI office in Lisbon, and Philine Kalb in particular, were about her only chance to overcome the obstacles. Unfortunately, however, the DAI headquarters had just decided to close down the Lisbon office because of severe financial cutbacks by the German government. That decision had a major impact on Philine, both in her private and professional life, and it kept her mind and time fully occupied. Despite all the problems, however, she agreed to meet Tanya at the 6th Meeting of the European Association of Archaeologists in Lisbon in September 2000. And regardless of her own situation Philine decided to help her fellow German. In the months that followed Philine proved much more than simply well-connected and supportive: apart from introducing the German PhD student to some of the more important Iberian archaeologists and institutions she invited Tanya to study the Neolithic and Chalcolithic ceramics

from the sites of Vale de Rodrigo 3 (Èvora) and Monte da Ponte (Èvora), both part of the archaeological survey project conducted by Philine and Martin Hoeck. The results were meant to be included in Tanya's PhD research. Philine also invited Tanya repeatedly back to Portugal and provided accommodation, provisions, transport, and more.

It did not take long for Philine Kalb to become an indispensable tutor, advisor and friend to Tanya, who quickly realized the important role that her tutor played throughout Iberia and beyond. But since Philine had shifted her focus away from Germany and towards Iberia as long ago as the early 1970s, her work was much less well known and less acknowledged in her country of origin. That changed slightly when Philine was relocated back to Germany and to the RGK (Römisch-Germanische Kommission of the DAI) in Frankfurt in 2000, but recognition of her contribution never reached the level it had held back in Portugal. That is why the editors developed the idea of honouring Philine with a book, an initiative that would also serve to advertise Philine and her work to a broader audience beyond the borders of Iberia, in Germany and other European countries. The idea was quickly picked up by Morten Hegewisch, who had met Philine at the RGK where he had held a 5-year trainee assignment from 2000 to 2005. Their acquaintance brought many opportunities for shared laughter, meals, wine, tea, and discussions, that were both interesting and productive. He soon developed a strong liking for his older colleague, with her energetic drive and generous nature. His fondness of Philine was quickly shared by his fiancée, Nicola Lignitz. Morten had already gained experience as an editor. Nicola was also experienced in editorial work through her employment with the EAZ (Ethnographisch-Archäologische Zeitschrift) in Berlin.

*

Our thanks first and foremost are owed to everyone who has contributed to this book. We especially appreciate the patience and understanding of those who submitted their papers early but had to wait for two and a half long years before the final release of the volume.

While most of the papers in this volume concern Iberian archaeology, which can be no surprise given Philine's professional interests, that was not a limitation imposed by the editors. Our priority was rather to invite fellow researchers with a special personal tie to Philine Kalb to contribute to the book regardless of their own field of expertise. This unlimited freedom of choice has resulted in a gratifyingly broad spectrum of geographical spaces, chronological periods, and chrono-cultural issues and subjects – many of them closely related to Philine's own work through four decades of dedicated research. A journey across Europe and beyond – from its western margins

Preface

to the remote East, from the Neolithic to the Late Roman Empire, and from geomagnetic survey to ethnology – that is the scope this book has to offer to the reader.

Morten Hegewisch prepared the layouts, and in conjunction with Nicola Lignitz was responsible for editing the German papers. The English papers and summaries were edited by Tanya Armbruster and Graham Salisbury (Preston, UK).

We would also like to acknowledge the help of Petra Hanauska (Frankfurt am Main) who gave guidance and advice with the layouts. Further thanks are due to Professor Dr. Joachim Henning and Professor Dr. Achim Leube, editors of “Studien zur Archäologie Europas”, for accepting this book.

The photographs picturing Philine at various stages of her career were provided by Michael Kunst, Barbara Sasse, Tanya Armbruster and other friends and colleagues. Michael Kunst must also be thanked on many different

levels, not least for putting us in touch with some of Philine’s long-term friends from Iberia and for his always unconditional offer of support and advice. The megalith tomb in the cover picture is the Anta de Pendilha, district of Vila Nova de Paiva (Portugal). The picture was taken from an open source and modified and enhanced by Morten Hegewisch.

We hope that Philine will enjoy this book. We wish her every success with all her ongoing projects and ideas, trusting that they will save her from boredom, and will ultimately give her all the joy and satisfaction that she deserves. We wish her many more decades of excellent health, and that she will continue to thrive with all that warm charismatic energy that so much has become her trademark.

Berlin, October 2009

Tabula Gratulatoria

Friedrich Lüth Hans-Joachim Gehrke Siegmар von Schnurbein

Friedrich Lüth

Hans-Joachim Gehrke

Siegmар von Schnurbein

Susanne Sievers

Susanne Sievers

Dirce Marzoli

Dirce Marzoli

Knut Rassmann

Knut Rassmann

Gabriele Rasbach

Gabriele Rasbach

Svend Hansen

Svend Hansen

José Ramos Muñoz

José Ramos Muñoz

Wolf Haio Zimmermann

Wolf Haio Zimmermann

Claudia Theune-Vogt

Claudia Theune-Vogt

Gerda Sommer von Bülow

Gerda Sommer von Bülow

Claus-Michael Hüssen

Claus-Michael Hüssen

Michael Erdrich

Michael Erdrich

Karl-Friedrich Rittershofer

Karl-Friedrich Rittershofer

Hans-Ulrich Voß

Hans-Ulrich Voß

Alexandru Popa

Alexandru Popa

Annika Teichner

Annika Teichner

Angelika Linß

Angelika Linß

Holger Baitinger

Holger Baitinger

Dorothee Sack

Dorothee Sack

Armin Becker

Armin Becker

Ursula Rothe

Ursula Rothe

Nicola Lignitz

Nicola Lignitz

Nina Schücker

Nina Schücker

Kirstine Ruppel

Kirstine Ruppel

Michèle Eller

Michèle Eller

Claudia Nickel

Claudia Nickel

Holger Wendling

Holger Wendling

Anselm Drafeh

Anselm Drafeh

Thorsten Westphal

Thorsten Westphal

Valeria Szabo

Valeria Szabo

David Wigg-Wolf

David Wigg-Wolf

Katharina Becker

Katharina Becker

Daniel Peters

Daniel Peters

David Poensgen

David Poensgen

Michael Portugall

Michael Portugall

Nils Müller-Scheeßel

Nils Müller-Scheeßel

Marta Barthowiak

Marta Bartkowiak

Susanne Zabehlicky-Scheffenecker

Susanne Zabehlicky-Scheffenecker

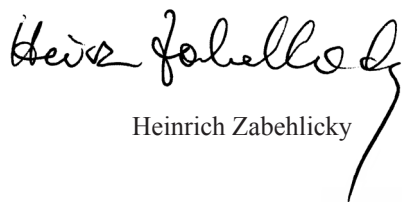
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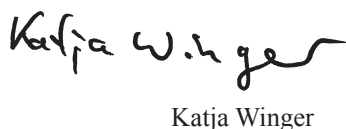
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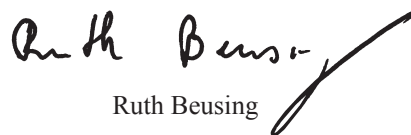
Heinz-Jürgen Köhler

Heinz-Jürgen Köhler

Tabula Gratulatoria


Heinrich Zabehlky


Katja Winger

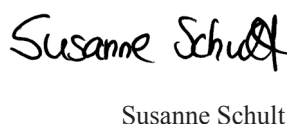

Ruth Beusing


Monika Schottke

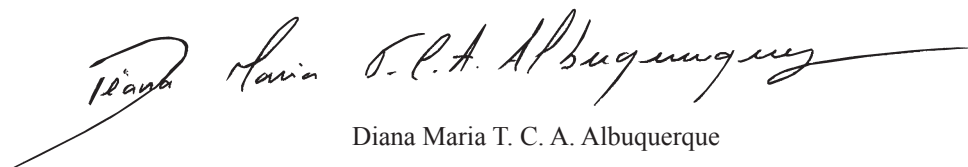

Kathleen Benecke

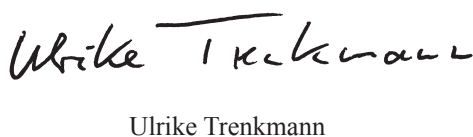

Serife Çalışkan


Sebastian Messal


Susanne Schult


Roland Gauß


Diana Maria T. C. A. Albuquerque


Ulrike Trenkmann


Güler Yüksel


Sonja Magnavita


Carmen Hamburger

Außerdem/Furthermore ...

Margarita Diaz-Andreu · Martin Höck · Hermanfried Schubart

Und/And ...

Por la presente deseamos expresar nuestra adhesión al Homenaje que se está organizando a la Dra. Philine Kalb, a quien queremos manifestar nuestro reconocimiento a una dilatada labor en el marco de la Arqueología de la Edad del Cobre y de la Edad del Bronce en la Península Ibérica, centrada en el área portuguesa. Pero, si importante ha sido su trabajo, no lo es menos su profunda humanidad, que le permitió crear fuertes vínculos de amistad en el tiempo, entre los que nos encontramos nosotros desde hace casi 40 años.

María Dolores Cámlich Massieu. Universidad de La Laguna. Canarias. España
Dimas Martín Socas. Universidad de La Laguna. Canarias. España

Weitere Grüße/further congratulations ...



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Estimados amigos:

Con gran alegría nos adherimos al merecido homenaje a la Dra. Philine Kalb, con motivo de su jubilación. Philine Kalb ha contribuido de manera fundamental al desarrollo de la investigación prehistórica en la Península Ibérica, al tiempo que ha compartido su amistad y su trabajo con todos nosotros en tierras granadinas.

Un cordial saludo,

A handwritten signature in black ink, appearing to read 'F. Molina'.

A handwritten signature in black ink, appearing to read 'Trinidad Nájera'.

Fernando Molina González
Catedrático de Prehistoria y Director del Departamento de Prehistoria y Arqueología de la
Universidad de Granada.

Trinidad Nájera Colino
Profesora Titular de Prehistoria del Departamento de Prehistoria y Arqueología de la
Universidad de Granada.

Leovigildo Sáez Pérez
Profesor Titular de Prehistoria del Departamento de Prehistoria y Arqueología de la
Universidad de Granada

On Late Bronze Age *tranchets* from the western Iberian Peninsula

Raquel Vilaça (Coimbra)*

Abstract

In 1976, Philine Kalb drew attention to three bronze artefacts from central Portugal. She interpreted these correctly as *tranchets*, and pointed out a typological detail of the haft area, namely the spaces on the tangs, as found in Huelva-type swords. The present study deals with these tools again, now on the basis of about twenty pieces of the same type, all from the western Iberian Peninsula, some unpublished. Descriptive and typological analyses of each piece are followed by discussion of the main differences; reference is made to results of the metallurgical analyses of some of the pieces. The contexts of the *tranchets*, almost all from settlements occupied at the end of the 2nd–mid. 1st century BC, are discussed. Some of them have C14 dates, which confirm this chronology. The use of these tools has aroused some controversy; the author follows Kalb's theory that they were knives for cutting hides. The geographical distribution, contexts and metallurgy of the pieces lead to the conclusion that they were products characteristic of central Portugal and Spanish Upper Extremadura, from which they may justifiably be called *tranchets* of 'Lusitanian type'.

Zusammenfassung

1976 lenkte Philine Kalb die Aufmerksamkeit der Wissenschaft auf drei bronzene Artefakte aus dem zentralen Portugal. Sie interpretierte die Objekte ('tranchets') als Werkzeugmesser, und wies darauf auf ein typologisches Detail der Griffe hin, nämlich auf durchbrochene bzw. offene Griffbereiche. Dieses Merkmal verbindet jene Fundstücke mit Schwertern des sog. Huelva-Typs. Die vorliegende Studie befasst sich erneut mit diesen Werkzeugen, nun jedoch auf der breiteren Materialbasis von etwa 20 zum Teil bisher unveröffentlichten Exemplaren, die alle aus dem Westen der Iberischen Halbinsel stammen. Auf eine deskriptive und typologische Analyse der Objekte folgt die Diskussion ihrer wesentlichen Unterschiede. Thematisiert werden ferner metallurgische Analysen. Die Fundobjekte stammen nahezu vollständig aus Siedlungen, die in das Ende des 2. und die Mitte des 1. Jahrhunderts v. Chr. datieren. Untermauert werden die

chronologischen Angaben durch C14 Analysen. Der Gebrauch dieser Werkzeuge wird kontrovers diskutiert, die Autorin folgt dabei Philine Kalbs Theorie, dass es sich bei den Objekten um Werkzeuge zum Schneiden oder Bearbeiten von Tierhäuten gehandelt habe. Die geografische Verteilung, Kontext und Metallurgie der Stücke führen zur Schlussfolgerung, dass die Objekte charakteristische Produkte des zentralen Portugal und der spanischen Extremadura waren, sodass sie zu Recht als „tranchets of 'Lusitanian type'“ bezeichnet werden können.

Introduction

In 1976, Philine Kalb drew attention to 3 bronze artefacts from the central region of what is now Portugal; in line with Roth's theory for similar European pieces, she interpreted these as being knives for working hides and leather. He emphasised a typological detail, namely the unusual tang area, with spaces, similar to swords of 'Huelva type' (Roth 1974; Kalb 1976).

All these pieces had already been published, but they had not been identified as *tranchets*. The first, from Castelo Velho de Caratão (Mação), is described and illustrated only in the original publication (Pereira 1970: 170 Fig. 73). Several years later, Montegaudo included it in his corpus of Peninsular axes as "type 36 G" (Caratão), giving its function as a plane for cutting thin slices of wood (Monteagudo 1977: 170). The other two artefacts are from Senhora da Guia de Baiões (São Pedro do Sul) and were interpreted as spatulas, or the hollowed tangs of unidentified objects (Silva 1979: 519).

The question of the precise function of this type of object remains unresolved, as we shall see below. However, they have been interpreted as knives for cutting flexible solid objects such as skins, leather or hides, as seen in the names given to them in some languages: "Ledermesser" in German, "cuchillas de zapatero" in Spanish (they are "tanged chisels" in English and "*tranchets*" in French). But bibliographies show that it is this last name which was finally adopted by the Portuguese and Spanish archaeological community.

Studies on the late Bronze Age in central Portugal have progressed considerably in the last twenty years, in large part due to systematic excavations of settlements in Beira Interior and Beira Central. Our direct responsibility for many of these has allowed us to identify more pieces which

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may be seen as *tranchets*, all perfectly contextualised and dated, and some unpublished. Other similar pieces, or fragments, from other regions, namely southern Portugal, Spanish Extremadura and Andalusía, have also been published, and are brought together here. Despite these new finds, however, it remains true to say that the type is relatively rare among late Bronze Age products.

The aims of this study are therefore twofold. Firstly, to bring together information on these western Iberian *tranchets*, which typologically form a perfectly coherent group, fully confirming the theory that Philine Kalb presented thirty years ago. Secondly, to indicate the value, in the context of their sources, of these interesting artifacts: the problems connected with them and with other related finds demand even more attention from archaeologists.

Tranchets from the western Iberian Peninsula

About twenty pieces, published or unpublished, have come to our attention among examples from the west of the Peninsula. The *tranchet* from Paredes de Nava (Palencia, Espanha) has been excluded, since it belongs to a different type from those which concern us here: it is the 'Atlantic' type of *tranchet* with a spiked tang. It is the only example in the Peninsula, according to Fernández Manzano (1986: 120 & Fig. 37–1), though Coffyn mentions another Atlantic-type *tranchet* from the Cazorla collection in the museum at Valença (Coffyn 1985: 55). We have not had the opportunity to do a systematic search to ascertain if there may be other examples from the Peninsula, but published elsewhere.

The geographical distribution of our *tranchets* (Fig. 1) indicates yet again the crucial role of central Portugal in the late Bronze Age as one of the most dynamic regions of production, imitation, export and import – the so-called 'Lusitanian' group (Coffyn 1985: 267). It is perfectly legitimate, from what we know, to include north-eastern Extremadura (Spain), with its substantial number of *tranchets*, in this group. We shall now proceed to examine the *tranchets* individually, beginning with sites in the north and going south, first in Portugal and then in Spain. Since we could not examine every piece directly, in certain cases our study is based on published sources.¹

1. Senhora da Guia de Baiões, São Pedro do Sul, Viseu

The two *tranchets* from this important late Bronze Age site were found by Celso Tavares da Silva in his 1973 excavation campaign. Little is known of the precise conditions of the finds or their contextual association with structures and other material – pottery, lithic and metal

(Silva 1979). Nevertheless, despite some stratigraphic problems, it is a highly coherent set in terms of culture and chronology. The settlement has been studied extensively, and interesting work will continue to be done on it. In a recent study, for example, we have published three C14 dates, to be mentioned later (Vilaça 2008).

One of the pieces (Fig. 2,1) has a straight tang and four irregular cavities. The blade, broken near the edge, is trapezoidal, with lateral ribs and one central one. Size²: length 11.2; width, edge 4.4; max. depth 0.5 (Kalb 1976: 201 Abb.1–1 Taf. 48). The second piece (Fig. 2,2) is nearly identical to the first, but the tang is broken laterally, and it has only three cavities. The blade, also trapezoidal and ribbed on one side, is shorter and practically complete; the cutting edge is straight. Size: length 10.9; width, edge 3.4; max. depth 0.4 (Kalb 1976: 201 Abb. 1–2 Taf. 48).

2. Tapada das Argolas, Capinha, Fundão, Castelo Branco

First mentioned in the 18th century, this settlement was occupied during the late Bronze and Iron Ages and into the early Roman period, as shown by the varied material collected at different times. The fact that it was never scientifically excavated limits our understanding of its timespan, its internal organization, and the chronology of its walls. The dates referring to the period of interest were ascertained in a recently published study, which also includes a fragment of a *tranchet* (Vilaça *et al.* 2002–2003: 182, Fig. 7–3 and Est. II–2).

This was a casual find with no precisely known context (Fig. 2,3). Only the blade survives, with part of one of the rectangular cavities. Its outline is nearly trapezoidal, with lateral ribs and one central one, perpendicular to the blade and on both faces. The blade, slightly convex and asymmetric, is lenticular in cross-section. Size: length 4.2; width 3.6; depth 4.

3. Monte do Frade, Penamacor, Castelo Branco

Occupying only a small area (c. 126 m²) on a hill-top, this is one of the most interesting late Bronze Age sites in Beira Interior, precisely because of the contrast between its size (limited to two huts) and the quantity, diversity and quality of its artefacts: stamped and incised pottery with burnished decoration of 'Lapa de Fumo' type and 'Cogotas' type pieces; bracelets, daggers, awls, arrowheads, rings, *tranchet*, tweezers, an iron blade, etc. (Vilaça 1995: 125–63, Est. CIV). Of the *tranchet*, little more than the tang remains (Fig. 2,4). Sub-rectangular in shape, it has three irregular, roughly rectangular cavities; a fourth, near the end, is not complete. What little remains of the blade, much corroded, is rectangular. Size: length

1 We mention only the most important.

2 Sizes in centimetres for all pieces.

8.2; max. width 2.5; max. depth 0.4. (Vilaça 1995: 141). This is the information that has been published, but, analysing the piece once again, we have some doubts about the blade. In fact the piece seems to be almost complete. Still, the blade is difficult to distinguish from the tang because it is so small, and we should not neglect the theory that this is only the handle of the artifact.

4. Monte do Trigo, Idanha-a-Nova, Castelo Branco

This late Bronze Age settlement, partly walled, was built on the top of a conical hill, on the site of a Chalcolithic settlement. The *tranchets* were found in a zone (B8 02) with a high concentration of metal artifacts, including small iron blades; these objects had been deliberately deposited and burnt (Vilaça 2006b: 88–90).

One of the *tranchets* (Fig. 2,5) appeared with two small bronze fragments, circular in section. Sub-trapezoidal in shape, it is incomplete, lacking part of the tang, which has two cavities, one sub-elliptical and the other possibly similar. The blade has straight, slightly raised sides and a narrow rib on each face; irregular and asymmetrical, it would be practically useless.

The piece is misshapen due to the action of fire, particularly around the tang, while the blade is also ridged and pitted by intense heat. The porous nature of the surface could also be due to the casting process. Size: length 7.8; width, edge 2.6; depth 0.4.; weight 24.37 g. The second *tranchet* (Fig. 2,6) is also incomplete, practically reduced to the blade. Sub-trapezoidal in shape, it has the base of a cavity at one end. The lower surface is totally smooth, while the other has an interesting decoration with fine lines forming small rectangles. The blade is much damaged, but seems to have been rectilinear and asymmetrical. Like the previous piece, it is misshapen by fire. Size: length 6.7; width, edge 2.5; depth 0.3.; weight 19 g.

5. Castelo Velho de Caratão, Caratão, Mação, Santarém

Unfortunately the data on the excavations at this site in the 1980s have not yet been completely published. As far as we know, the settlement was occupied in the Chalcolithic and the late Bronze Age, with characteristic burnished decorated pottery and traces of metallurgical activity³. The *tranchet* from Caratão (Fig. 2,7) is sub-rectangular, with almost straight sides. The back is flat and the front has a central rib, with two lateral ribs forming borders. The tang has a large cavity (originally it may perhaps have had three) and the cutting edge is straight. Size: length 11.5; width, edge 2.3; depth, edge 0.2.; weight 25 g. (Pereira 1970: 170 & Fig. 73). As mentioned at the

beginning, this piece is part of Monteagudo's 'type 36 G' (Caratão), and was interpreted as a plane (1977: 215).

6. Abrigo Grande das Bocas, Rio Maior, Santarém

Excavated by Manuel Heleno in 1937, this site has supplied ample evidence of occupation from the Upper Palaeolithic to the medieval period. The proto-historic materials (pottery and metal) have been published, and among these are fragments of a *tranchet* (Carreira 1994: Est. XXXIV–6 e 7). Two of these (Fig. 2,8) are from the area of transition from the tang to the blade, with markedly diverging sides (Carreira 1994: 83). Another fragment is from the tang, with two cavities (Fig. 2,9).

7. Quinta do Marcelo, Almada, Setúbal

This site, near the Tagus, has been interpreted as a seasonal camp related to gold-prospecting and to early bartering exchanges between local inhabitants and Phoenicians (Barros 1999: 18). Apart from the burnished pottery, metalwork consists of two fibulas, one with a double spring and the other a 'ad ochio' type, small iron knives, lead net-weights, and a razor (Barros 1998: 31–4). We think that this razor may be the piece referred to in another study as "bronze knife for treating skins" (Barros 1999, vol. 2: 34–5, 44–5). Here, the author describes it briefly, with a sketch and a photograph.

It is strange, however, that it is not mentioned in the part of the text dealing with this site, so that we do not know the precise context of the find. This piece was also discussed in a regional study of the settlement of Baixa Estremadura (Cardoso 1999–2000: 385; 390 and Fig. 33.2). Our description of this *tranchet* (Fig. 2,10) is based on the sketch; we can see it is broken in two parts, which do not fit together perfectly, probably because of corrosion. The sketch could lead us to think the piece was complete, but according to Barros's information, it is broken at one end and weighs 6.25g (Barros 1999: 44). The shape is sub-rectangular, the sides are straight and the tang has two sub-elliptical cavities, one quite long. Size⁴: length 7.7; max. width 2.6.; depth 0.3.

8. Castelo de Arraiolos, Arraiolos, Évora

On the hill where Arraiolos Castle now stands, the Bronze Age settlement is evidenced by a variety of structures and materials, found in excavations by Gustavo Marques in 1973 and 1994 and by the archaeological company Arkaivos at the beginning of the present century. The materials are presently under study; particularly noteworthy is the superb set of pottery, with burnished decoration inside, outside or on both surfaces. Most of the metal pieces were

3 Data presented by M. A. Pereira at the *Simpósio sobre o Bronze Final na Beira Interior* (Mação, 1988).

4 Confirming that the drawing is to scale.

found in 1973 and come from a trench in sector II, on the upper platform within the walls on the eastern side⁵. One is a small fragment of the tang of a *tranchet* (Fig. 2,11), reference number CA S5 II⁶, which has been published by Carreira, although he indicates that it came from excavations on the slope below the castle (1994: 83 Fig. 11.3). It is one end of the tang, roughly triangular in section, including part of a cavity. Size: length 33.2; max. width 3; depth 0.3.

9. Castelos, Baleizão, Beja

Castelos is part of a network of settlements from the 1st century BC centred on the Guadiana in the districts of Moura, Serpa e Beja. The site, which has a double wall, was identified by Conceição Lopes, who attributed it to the late Bronze Age (Lopes 2003: 90 note 2 Fig. 19). Among the collections of the National Museum of Archaeology are some unpublished metal pieces found at this site which fully support this dating. According to the label they were given by José Brissos, but no further details of the find are known. Among them are two spearheads, a chisel, a *tranchet* and small fragments of metal. The *tranchet* (Fig. 2,12) is complete, though broken in the centre. The drawing and description given here are only provisional, since the piece has never been cleaned. Both surfaces are irregular, due to corrosion. The tang is roughly circular, with two sub-elliptical cavities side-by-side. A slit-like cavity runs down the middle part, which is narrower. The flat blade is wider at the edge, which is almost straight. Size: length 12.5; width, edge 4.4; depth 0.4.

10. La Muralla del Agujón de Pantoja, Trujillo, Cáceres

This large *castro* from the middle Iron Age, situated at the mouth of the Tamuja with the Almonte, has also produced pottery and metal dated to the late Bronze Age, such as a complete *tranchet* (Martín Bravo 1999: 37; 54 Fig. 8.8). From the published drawing (Fig. 2,13) this is sub-trapezoidal in shape; the tang has two cavities, one approximately square, the other roughly rectangular; the blade seems to have a central rib; the sides are slightly diverging, and the cutting edge is straight.

11. El Risco, Sierra de Fuentes, Cáceres

This hill settlement, occupied in the late Bronze and early Iron Ages, is at an obviously strategic point, dominating

the Cáceres plain. (Martín Bravo 1999: 35). Bravo's important work publishes the metal artifacts found here and kept at the Provincial Museum in Cáceres, among them four *tranchets* (Martín Bravo 1999: 37; 54 Fig. 7.1–4). The most complete piece (Fig. 2,14) is sub-rectangular, with an opening at one end and a roughly convex cutting edge. Another piece (Fig. 2,15) has an incomplete tang, with part of a rectangular cavity, indented but not completely empty; the sides of the blade diverge slightly and the cutting edge is almost straight. The other two pieces (Fig. 2,16–17) are very incomplete, with only the blades remaining and lacking the tang area, though the beginnings of a cavity are visible.

12. El Castillejo, Robledillo de Trujillo, Cáceres

On the southern slope of this imposing hill there is a *castro* from the middle Iron Age; we do not know the precise source of the materials from the late Bronze Age, in particular two *tranchets*, now in the Provincial Museum in Cáceres and studied by Martín Bravo (1999: 34–5; 54 e Fig. 6.3 e 7)⁷. Both pieces are incomplete. One (Fig. 2,18) has a sub-oval cavity. The other (Fig. 2,19) lacks the tang area; it has a sub-circular cavity, with three small ribs going towards the cutting edge, which is convex and heavily corroded.

13. Rio Genil, Sevilha/Córdoba

At Remanso de las Golondrinas, in a meander of the river near its junction with the Arroyo Blanco, various bronze artifacts have appeared, including three swords, a dagger, a flesh-hook, a spearhead and a *tranchet* (Armada Pita & López Palomo 2003). The last two were found together: the *tranchet* was at first thought to be razor (López Palomo 1978). Near here are the sites of Castellares and Alhonor, whose inhabitants, it is believed, were responsible for the bronze pieces (Armada Pita & López Palomo 2003: 171). Due to the proximity of the sites, to their situation on the river bank, and to the finds of groups of pieces in different times and places, the deposit – or deposits – raise interesting questions, as we have recently discussed, particularly around those we have called “river-bank deposits”, “fields of deposits” and “peripheral deposits” (Vilaça 2006a).

The *tranchet* (Fig. 2,20) is an elegant piece, with a roughly trapezoidal blade; the cutting edge, though incomplete, may have been straight. In the central area, between the blade and the tang, the piece narrows and then widens, first oval in shape, then circular. The tang is thus formed of two interlinked rings which follow the shape of the two cavities, oval and circular. Size: length 14.6; max. width 3.3.

5 Information from the ‘Arquivo Gustavo Marques’, National Museum of Archaeology. Our thanks to the Director of the museum, Dr. Luís Raposo, for permission to consult the archive.

6 See previous note.

7 The author presents another artefact from this settlement, resembling a wide chisel with a handle with a large elliptical cavity (Martín Bravo 1999: 34, Fig. 6–9).

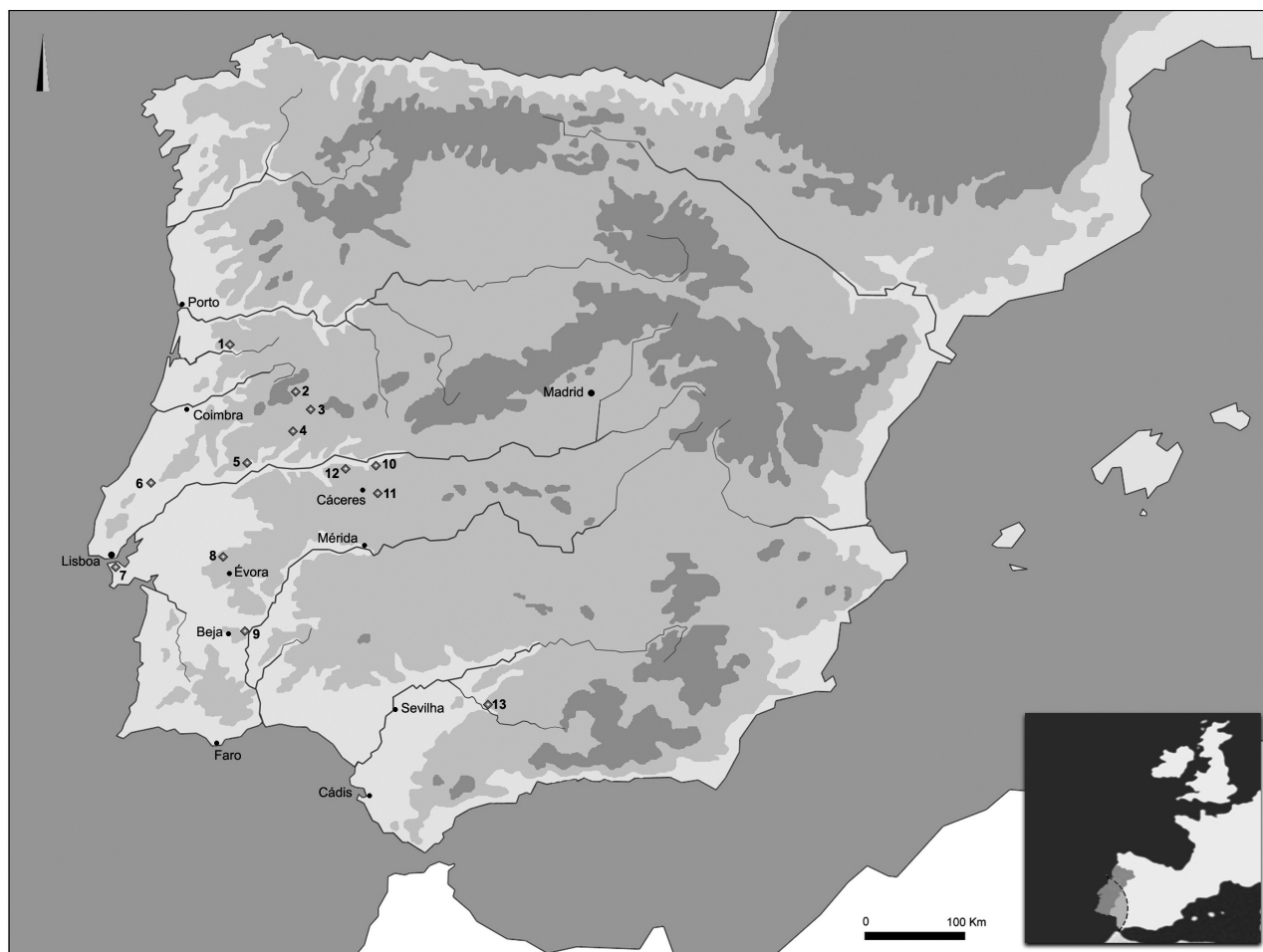


Fig. 1. Distribution of *tranchets* within the study area.

Typology of the *tranchets*

In view of the data available on the three families of *tranchets* – tanged, spiked and socketed – defined by Nicolardot and Gaucher (1975: 105), it makes sense to speak of a fourth, with perforated tang, identified by Kalb (1976) and now amply confirmed by examples found since then, which we have brought together here. The characteristics of the tang are thus the main distinguishing feature. It also seems reasonable to associate this last type with products from the west of the Iberian Peninsula, where the known examples are concentrated. One other *tranchet* with a sub-circular perforated tang, only a fragment of which remains, was found in the deposit at Monte Sa Idda (Cagliari, Sardinia) (Taramelli 1921: 56 Fig. 77) (Fig. 2,21). Other types are clearly characteristic of countries on the other side of the Pyrenees, especially France and England.

As for those which we are concerned with here, proceeding to further analysis – without denying the remarkable typological coherence shown in the characteristics of the perforated tang – we find certain differences

in the butt the cutting edge and the general shape of the pieces.

From a methodological perspective, it is perhaps premature to try to establish various types with well-defined characteristics, in view of the small number of examples, especially complete ones. In addition, as we have mentioned, we have not been able personally to inspect all the pieces. But we can trace some outlines which may perhaps be refined or corrected in the future by additional information.

Despite these hesitations, the fact is that a typology has already been established, based on the development of the tang and the shape of the cutting edge; five variants have been defined, more or less the same as the number of *tranchets* used (Martín Bravo 1999: 54 Fig. 15.A). And if these two criteria can serve as distinguishing marks, it is true that others could be used, with equal validity.

As for the general shape, there are pieces which are more or less rectangular, that is, where the blade develops as an extension of the tang (e.g. Caratão, Quinta do Marcelo, El Risco 1). Others, on the contrary, are sub-

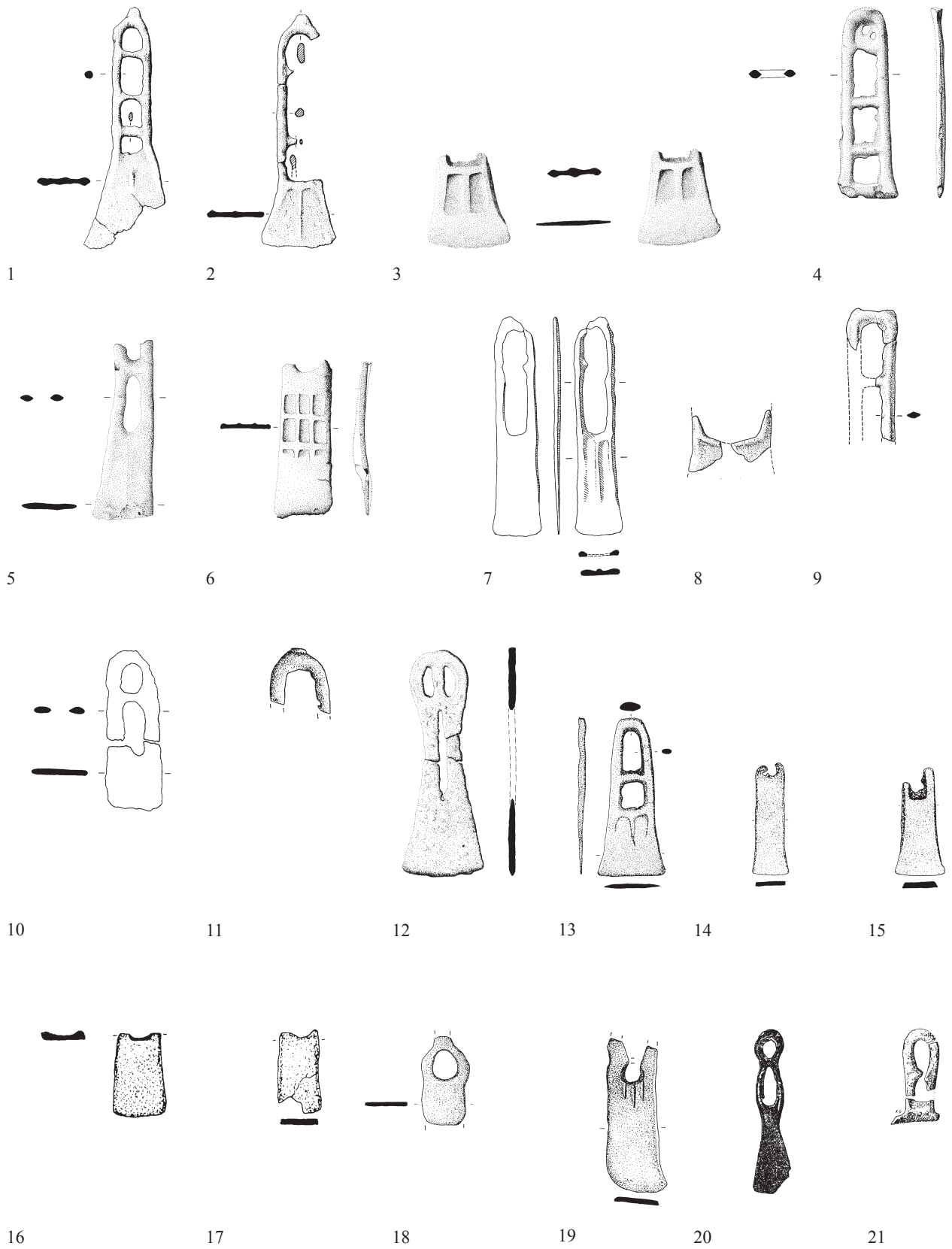


Fig. 2. Tranchets from the western Iberian Peninsula (several scales).

trapezoidal in outline, so that the blade has diverging sides, clearly distinguished from the tang (e.g. Baiões, Tapada das Argolas). There are yet others with a sinuous or tripartite shape (e.g. Rio Genil).

Furthermore, we must stress that some examples, (Caratão, Monte do Trigo 2, Quinta do Marcelo? e Castelos?⁸) are one-sided, that is, one face is totally smooth. Although it is impossible to show any link in terms of manufacture, it is maybe no coincidence that central Portugal also produced palstaves which were similarly single-sided (Coffyn 1985: 219).

Blades can be smooth or ribbed; ribs are either simple and indistinct (Monte do Trigo 1), or well-defined (Baiões 2, La Muralla, Tapada das Argolas). Exceptionally, we find ribs forming a decorative network (Monte do Trigo 2). Decoration of such functional pieces as *tranchets*, axes and spearheads is worth further attention, but falls outside the scope of this study.

Cutting edges vary between straight (as at Rio Genil, La Muralla) and convex (Castelos, Tapada das Argolas). A highly significant detail, proving use, probably for cutting flexible solids, is the asymmetry of some edges (Monte do Trigo 1, Tapada das Argolas, El Castillejo 1). These suggest a cutting movement that was always in one direction, compatible with the presumed function.

As for the tangs, here too there are marked differences, such as straight (as at Bocas), and rounded (Castelos, Rio Genil). The rounded shape is also found in the Sardinian *tranchet* mentioned above. We cannot do more here than simply note the fact that the examples from the Iberian Peninsula are from the southernmost regions.

Another possible distinguishing criterion is the shape and number of cavities in the tangs. In some cases they are sub-rectangular or roughly square, in others they are ovoid, sub-circular or sub-elliptical, almost always in accordance with the general shape of the tang. The cavities are normally in a line of four (e.g. Monte do Frade, Baiões 1), three (e.g. Baiões 2) or two (e.g. Quinta do Marcelo, La Muralla). The example from Castelos shows us another arrangement and also shape, with slit-like cavities, much narrower than those of other *tranchets*, arranged with two side by side and one in the centre.

The shape and number of spaces on the tangs is a particularly useful criterion for the researcher, but how important would it have been for those who made and used the tools? **To be useful, the tangs had to be covered with handles of wood, bone, twisted cord, etc.** This takes us back to the old emic/etic problem raised in the 1950s by Ford and Spaulding. As we can see, there are several differences among the *tranchets* of the western Iberian Peninsula, but these do not negate the obvious unifying factor of the cavities in the tangs. If the variants indicate some chronological evolution, regional specialisation or different uses, this is a question that must remain open – which does not seem to us to be a great problem.

8 As mentioned, study of this piece was limited by its not having been cleaned.

Metallurgy of the *tranchets*

Not all the *tranchets* have been subjected to metallurgical analysis, but we can put forward some suggestions on the basis of data on twelve of the pieces⁹. It is true that not all the analyses used the same methods, which would of course be desirable in a more rigorous comparison, especially in calculating the percentages of the constituent elements. But this does not affect all of the evidence, as we shall see. **Whichever methods are used, analysis is always problematic. Each method has its limitations and advantages, as many researchers have recognised, including the present author (Vilaça 1997).**

Recently, metal materials from Baiões, including the two *tranchets*, were analysed by energy dispersive X-ray fluorescence¹⁰, confirming that they are binary alloys of copper and tin, like the other materials from this site (Valério *et al.* 2006: 299). The values of tin are obviously very high (41.5% and 47.6%) and certainly unrealistic in terms of the actual alloy: this can be explained by the layer of surface corrosion and by the method used.

The *tranchet* blade from Tapada das Argolas was analysed at the National Archaeological Museum in Madrid¹¹, also by energy dispersive X-ray fluorescence, and this also showed binary composition (Vilaça *et al.* 2002–2003: 188). The values of tin (19.1%) are slightly above the ideal for a good alloy of copper and tin (12–15%), but within acceptable limits.

The *tranchet* from Monte do Frade was initially analysed by the same energy dispersive X-ray fluorescence¹², which showed a high level of tin (33.8±1.3%) (Vilaça 1995: 352–9). Later it was tested by scanning electron microscopy¹³, which naturally confirmed the binary alloy, but found normal values of tin (10.08%). The discrepancy in the values of this element obviously results from the disparity of the methods used (Vilaça 1997: 128; Merideth 1997).

Analyses of the two *tranchets* from Monte do Trigo using scanning electron microscopy and now published for the first time¹⁴, show binary bronze alloys with tin percentages around 8–9%.

The *tranchet* from Castelo Velho do Caratão was analysed by the laboratory at Rennes together with other

9 The *tranchet* from Quinta do Marcelo has also been analysed, but the results are not yet available. Our thanks to Ana Melo for this information, from Pedro Valério, in charge of the analyses.

10 Analyses by Pedro Valério as part of Projects “Caracterização das produções metalúrgicas do Grupo Baiões/Santa Luzia Bronze Final” / “Metalurgia e Sociedade no Bronze Final do Centro de Portugal” (POCI/HAR/58678/2004).

11 Analyses by Ignacio Montero as part of Project BHA2001-0248 “Caracterización Tecnológica de la Metalurgia del Bronce Final en la Península Ibérica”.

12 Analyses by Ana Isabel Seruya at the Centro de Física Nuclear, Universidade de Lisboa.

13 Analyses by Craig Merideth, Institute of Archaeology (University College, London).

14 See previous note.

Nº.	Estação	Cu	Sn	Fe	Ni	Zn	As	Ag	Sb	Pb
1	Srª. da Guia	57,1	41,5	0,19	-	-	0,76	-	0,07	< 0,10
2	Srª. da Guia	51	47,6	0,19	-	-	0,44	-	0,21	0,1
3	Tapada das Argolas	80	19,1	0,04	0,05	-	0,32	0,146	0,33	0,08
4	Monte do Frade	66 ± 1,3	33,8 ± 1,3	-	-	-	-	0,058 ± 0,02	0,07 ± 0,01	-
		87,85	10,08	-	-	-	-	-	-	-
5	Abrigo Grande das Bocas	69,93	30,07	-	-	-	-	-	Vest.	-
6	Monte do Trigo	81,84	8,84	-	-	-	-	-	-	-
7	Monte do Trigo	86,51	7,99	-	-	-	-	-	-	-
		86,27	8							
		87,93	7,9							
8	Castelo Velho do Caratão	85,9	14	-	0,015	-	Vest.	0,04	0,008	0,03
9	El Risco	84,9	13,8	0,16	0,08	-	0,19	0,087	0,61	0,18
10	El Risco	94,6	5	0,22	-	-	0,16	Vest.	-	Vest.
11	La Muralha del Aguijón de Pantoja	88,8	10,8	0,12	0,11	-	-	0,019	0,025	0,11
12	El Castillejo de Robledillo	83,9	13,5	0,39	0,09	-	1,5	0,13	0,25	0,21

Tab. 1. Analyses of mentioned tranchets.

Portuguese late Bronze Age artifacts. Once again, results show excellent copper-tin alloys (Coffyn 1998: 175).

X-ray fluorescence applied to the centre of the *tranchet* from Abrigo Grande das Bocas showed a binary copper-tin alloy with a high level of tin (30.07%) (Seruya & Carreira 1994: 140).

As for the *tranchets* from Spain, we have analyses for the pieces from La Muralla, El Castillejo 1 and El Risco known as “*rasuradores calados*” (Gómez Ramos *et al.* 1998: 107). One of these is an exception to what we have seen so far, in that it has only a very small proportion of tin (5%).

Bringing together all the information in table 1, we can see that the results show considerable coherence among *tranchets* in terms of binary composition. They also show that this coherence fits with the characteristics of western Peninsular late Bronze Age metallurgy, particularly in central Portugal.

Furthermore, as we have stressed, the high levels of tin in some pieces must be understood in the light of the test methods and of the degree of corrosion in the pieces; it is not due to any technical ignorance of the makers, nor to the abundance of tin in Portugal (Vilaça 1995: 356–7; 1997: 142–3). We cannot agree, therefore, with interpretations which explain high percentages of tin in artifacts from the Beiras and Estremadura as resulting from ample tin deposits.

Contexts of the *tranchets*

As we seen, this type of *tranchet* has a well-defined distribution area in the Peninsula, especially concentrated in central Portugal and Spanish Extremadura (Fig. 1). It would have been expected, given the similarity in the type of handles, that we would find most examples in areas where ‘Huelva type’ swords have been found. It is quite possible that there are some unpublished pieces in museums which could alter the distribution pattern we present here.

We have also seen that the original contexts of these pieces are known, even if sometimes only superficially and imprecisely. In other cases, on the contrary, we not only know the contexts in detail, but we also have related C14 dates. Thus, in a cultural-chronological context, these pieces present no particular problems: they are characteristic of late Bronze Age metalwork from the western Iberian Peninsula, mainly from the 11th to the 9th centuries BC.

In the case of the *tranchets* from Monte do Frade and Monte do Trigo, there are C14 dates for the levels where they were found. As for the dates recently obtained for Senhora da Guia, it has been impossible to establish clearly a direct relationship, due to insufficient field data, but indications are that such a relationship can be established. For the site of Quinta do Marcelo, information is more imprecise, since we do not have data on the contexts of the *tranchet* and of the dated samples (Barros 1999: 36).

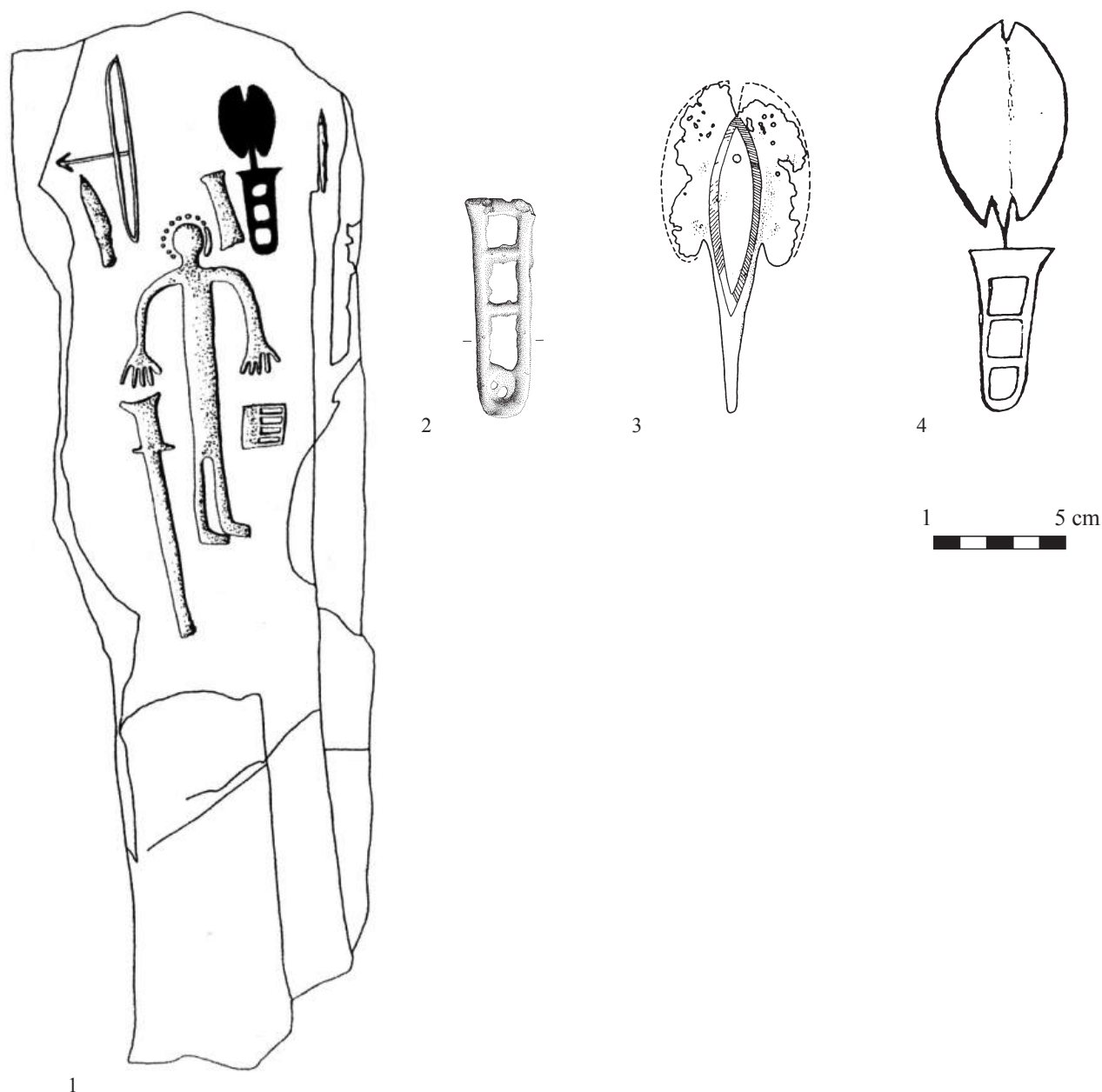


Fig. 3. 1. Stela of Capilla III (Badajoz) with two-part blade razor and parallel forms.

We can therefore add very little on the latter pieces, other than the results so far obtained, either those discussed here, referring to the three dates, or others. The dates relate to two excavated structures, but we do not know which of them the *tranchet* came from. There are three dates from 'Bolsa 1' (ICEN-943: 2780±120 BP; ICEN-945: 2910±50 BP; ICEN-947: 3000±70 BP) and four from 'Bolsa 2' (ICEN-924: 2700±70 BP; ICEN-920: 2830±50 BP; ICEN-923: 2560±100 BP; ICEN-922: 2790±60 BP) (Melo & Senna-Martinez 2000: 98). According to these authors, the 2 sigma calibrated dates are: 1272–770 cal. BC; 1260–925 cal. BC; 1411–1004 cal.

BC; 994–783 cal. BC; 1121–841 cal. BC; 902–399 cal. BC; 1112–812 cal. BC.

The Monte do Frade *tranchet* was found near hearth 3 (sector I, layer 3), at a level where there are four C14 dates from carbonised wood (GrN-19660: 2805±15 BP; ICEN-971: 2850±45 BP; ICEN-969: 2920±50 BP; ICEN-970: 2780±100 BP). The 2 sigma calibrated dates show the following parameters: 1003–913 cal. BC, 1192–1132 cal. BC, 1292–946 cal. BC and 1257–790 cal. BC. We can estimate that the site was occupied between the 11th and the first half of the 10th centuries. The results of the first two are statistically similar, since calibrated dates

indicate the 10th century for the carbonised wood (c. 3-level 4b) which partially sealed layer 3, thereby making a *terminus ante quem* for the level where the *tranchet* was found (Vilaça 1995: 141, 162, 374).

For Monte do Trigo, seven 14C-dates are available, taken from charcoal samples at separate levels in layer 2. These dates (SaC1458: 3020±60 BP; SaC1456: 2990±50 BP; SaC1457: 2960±45 BP; Sac-1507: 2960±45 BP; CSIC-1289: 2913±41 BP; Sac-1506: 2880±45 BP; CSIC-1288: 2880±33 BP), all from the same cultural context, give the following values after 2 sigma calibration: 1419–1057 cal. BC, 1387–1056 cal. BC, 1368–1022 cal. BC, 1368–1022 cal. BC, 1262–997 cal. BC, 1211–925 cal. BC; 1193–937 cal. BC. (Vilaça 2006b: 94).

The three dates recently obtained for Senhora da Guia are highly reliable, since they have relatively small standard deviation and were obtained from fairly small seeds (beans and peas) which have a short life and therefore give readings which are very close to reality. The seeds come from excavations carried out in 1973 by Celso Tavares da Silva; we cannot be sure of their precise context – whether they were from sector A or sector B; we only know that they were found while sifting the soil (Silva 1979: 524). Indirectly, they can be associated with the materials from this campaign, which in terms of metals consist of two *tranchets*, a bead and two lance-heads, a spit, etc.; there was also pottery of ‘Baiões’ type and stamped ware (Silva 1979: 528).

The results (GrA-29095: 2745±40 BP; GrA-29097: 2680±40 BP; GrA-29098: 2650±35 BP), and the useable weighted average (2688±22 BP), produced the following values after 2 sigma calibration: 993–979 cal. BC, 906–796 cal. BC, 895–787 cal. BC and 895–806 cal. BC. The results therefore point to a chronology centred in the 10th and 9th centuries. (Vilaça 2008).

The results show Monte do Trigo to be one of the oldest carbon-dated late Bronze Age settlements in Beira Interior, dating mainly from the 12th–11th centuries. Baiões, on the other hand, is one of the more recent. If they were to be proved to have been both occupied at the same time, this would have been over a relatively short time, around 1000–975 cal BC.

Results of metallurgical analysis of artifacts from these and other settlements always show binary alloys, which tentatively supports a date prior to the 8th century BC.

Concerning types of contexts, all of them – with the single exception of the *tranchet* from Rio Genil – come from settlements or inhabited areas. We know of no finds from burials or from bronze deposits, whatever meaning we this may wish to give to them. Although there are obvious differences between the sites, which we shall not mention here, almost all are on high ground, sometimes but not always walled, strategically sited in the area. Only Quinta do Marcelo does not follow this model, being a seasonal camp on a beach.

At several sites it is clear that bronze was produced locally; presumably this also happened in at least some

of the other sites. These *tranchets* were cast in bivalve moulds. If we accept that the concentration of finds in a given region is a relatively reliable indicator of regional production, it is probable that at least some of these *tranchets* would have been produced at the regions where they were found. This idea has certainly had its critics, and it could be argued that there is no evidence of moulds for *tranchets* in these settlements. But in fact moulds have not been found here or in any other region of the Peninsula, as far as we know – yet moulds must have existed. For now, we have to concentrate on the pieces themselves, and assume, until proved otherwise, that they are typical products of central Portugal (Vilaça 2007).

However, without contradicting what we have said above, some sites where *tranchets* have been found (Senhora da Guia, Monte do Frade, Monte do Trigo, Abrigo Grande das Bocas, Quinta do Marcelo, Arraiolos) have yielded objects of markedly Mediterranean style – fibulas, tweezers, glass beads, iron knives, etc. We shall see that other factors, particularly relevant to the study of *tranchets*, bear witness to this connection with the south.

Function of *tranchets*

There is no good reason to doubt the alleged purpose of these tools, though agreement is not universal. It is more than probable that they were used to cut flexible solids, namely hides and skins. But further comments are necessary: we shall begin with the least controversial.

Tranchets have cutting edges. In some cases, as mentioned above, we notice asymmetrical damage, indicating that they always cut in the same direction (Kalb 1976: 201). Among the pieces we have studied, this is particularly clear in those from Tapada das Argolas, Monte do Trigo 1 and El Castillejo 1.

Considering the metal products characteristic of the late Bronze Age, it is recognised that there was a growth in this period, not only in number but also in diversity of types, each with distinct and specific uses. Furthermore, it is relatively uncontroversial to accept that the rearing of animals intensified and that the strategic value of hides in the exchange system increased in the region at this period (Vilaça 1998: 367–8; Vilaça *et al.* 2002–2003: 190).

In surveys of the topic, specific examples have clearly shown that animal rearing – *Bos taurus*, *Capra hircus*, *Sus domesticus* and *Ovis aries* – and also hunting – *Cervus elaphus* – were important activities for late Bronze Age peoples in Portugal (Cardoso 1996). There is a great deal of data to support this.

Therefore, specific leather-working tools would be perfectly normal, and the only surprising thing is that there are so few of them. Even including the most recent finds,

and others which will certainly be found in the future, production was tiny compared with total late Bronze Age metal products. We may suppose that this function could have been performed by another type of tool (metal or stone) among those already found, but whose specific purpose is not so obvious.

It is worth considering, too, if their rarity is linked with a job done by only a few people. **The fact is that very little** is actually known about leather work, or about the organisation of productive trades in general. **Leather, skins and hides** would have been used for clothes, footwear, bags, quivers, etc., but also for ‘nobler’, rarer purposes, such as shields and sword belts.

Although we have been assuming that the pieces we have studied are *tranchets*, we realise that other possible interpretations have been suggested, such as razors (e.g. Gómez Ramos *et al.* 1998: 107). The *tranchets* from Baiões have even been seen as possible mirrors (Harrison 2004: 151). If some other pieces can raise legitimate doubts, this is certainly not the case with Baiões. It is unfortunate that the same pieces should be “razors” in one study and “*tranchets*” in another, without any reason given for the change (Barros 1998: 32; 1999: II–44).

We believe that this alternative ‘razor’ interpretation comes from the thinness of some of the cutting edges, which resemble the delicate blades of razors. For the same reason there is sometimes confusion between razors and Palmela points. But razors do not have asymmetrical cutting edges, nor blades as those of *tranchets*. On the contrary, they are characterised by very delicate blades, showing a different manufacturing technique. Direct contact with all these pieces would certainly help to clear some of the doubts. Microscopic examination, especially of the cutting edges, to identify traces of use, and tests of micro-hardness, would also be worthwhile.

We know that the tangs of these *tranchets* are very similar to those of Sardinian daggers and mirrors, especially those from Torpe, Abini, Santa Vittoria (Kalb 1976: 204; Coffyn 1985: 222; Lo Schiavo 1991: 216–7; Vilaça 1995: 339). However, these have a small hole for fixing, and tangs with characteristic braided decoration of Sardinian-Cypriot style, not seen in Peninsular *tranchets*. In fact, the question of tangs generally merits some discussion here.

It is presumed that decorated handles, just because of their decoration, would not have been covered in wood, bone, etc. Undecorated ones, especially if they had never been polished after moulding, would have been covered. But the problem of holding these tools goes beyond the question of the presence of absence of decoration and/or of final polishing of the handles. It is the function that is the determining factor here, since the way a mirror or even a razor is held is quite different from that used for a leather-cutting tool. In the latter, efficiency depends not only on force, but on a good hand grip, which would only be possible with a wider handle. With the former, which

could be held easily, this shape of handle would be unnecessary.

Among the pieces we have studied, that from Monte do Frade is interesting in that it seems to be complete but to consist of only a handle. We cannot reject the possibility that it is the handle of some other object, not of a *tranchet* – a *tranchet* must have a blade. However, this piece does not have, and seems never to have had, a hole for fixing, which seems to invalidate this second hypothesis. If we turn the piece upside down, the problem would seem resolved, since one end does not really have a cavity or socket, but instead two small sub-circular holes which could have been used for fixing something (Fig. 2,4). **These holes are not intentional**, however, but rather the result of the casting process. No other *tranchets* resemble the Monte do Frade piece in this respect, unfortunately, or they might have helped solve the problem. The only similarity we can find is in an engraving, with all the limitations of interpretation inherent in this type of evidence (Vilaça 1995: 339).

This is a fairly realistic figure engraved on a *stela* at Capilla III (Badajoz), which can be interpreted as a razor, in view of its characteristic two-part blade (Fig. 3,1). Previously the figure was thought to be a mirror – a good example of the ambiguity mentioned above (Enríquez Navascués & Celestino Pérez, 1984: 240). Later Celestino interpreted it correctly and emphasised that it was the only case of a razor depicted on a *stela*, describing it in detail: “It has a handle in the shape of an inverted bell divided into three sub-circular sections. A stick comes from the handle, dividing two kidney-shaped blades, slightly separated from each other at the top” (“*Tiene un mango de forma acampanada invertida compartimentada en três secciones ligeramente circulares. Del mango parte una varilla que divide dos hojas arriñonadas ligeramente separadas entre sí en la parte superior*”) (Celestino Pérez 2001: 375).

This figure, then, has a motif of a two-bladed razor and a spike, the nearest parallel to which is the razor from Abrigo Grande das Bocas¹⁵ (Carreira 1994: Est. XXXIII) (Fig. 3,3–4), and another hollow shape which acts as a handle, just like the *tranchet* from Monte do Frade (Fig. 3,1).

It would make sense, therefore, to ask if the razor (for any kind of hair?) and the *tranchet* fragments from the former site are functionally different, or two different examples of the same type of object. We would also, of course, need to be less definite about the classification of the Monte do Frade piece as a *tranchet*.

Tranchets, mirror handles and razors are elements with some shared problems. **In fact there are *tranchets* with spikes and others with cavities.** The former are Atlan-

15 This type of double razor is also found in the central Mediterranean (e.g. Cassibile, Sicily), so we should have included it when we were dealing with the ‘Mediterranean presence’ in central Portugal (Vilaça 2008); this is an omission which we shall rectify when possible.

tic, the latter share stylistic affinities with other Mediterranean pieces and can be called ‘Lusitanian’ in their geographical distribution. There are razors with spikes, typically western-Atlantic but also known in the central Mediterranean (e.g. Sicily), and there are others with perforated handles, these being characteristic of urnfield cultures in the Peninsular and elsewhere. And there are also, as we have seen, spiked razors with perforated handles (Fig. 3,2–4).

Conclusion

It seems clear that *tranchets* from the so-called Atlantic Bronze Age in Portugal are different from those of the Atlantic Bronze Age in other parts of Europe, forming a variant which Kalb identified in 1976. The main characteristic of this variant lies in the perforated type of tang.

We now know of about twenty *tranchets* of this type. Others may be found in museum collections, as yet unpublished. And it is very likely that new examples will appear as excavation projects are carried out at late Bronze Age settlements in the Beiras, Estremadura, Alentejo and Spanish Extremadura. But even so, this would not affect the rarity of these tools among late Bronze Age metalwork. It also seems clear that there was a close geographical relationship of this particular tool type with the central-southern part of the western Iberian Peninsula. At the time this region, and particularly central Portugal, was a highly dynamic area in terms of production, exports and imports, connecting the Atlantic with the Mediterranean – Coffyn’s ‘Lusitanian group’ (1985: 267). All the information we have leads to the conclusion that this kind of *tranchet* was a genuine product of the region, so that they can justifiably be called ‘Lusitanian *tranchets*’.

Considering metallurgical aspects, the available results show considerable coherence, with the exclusive use of binary alloys. We now have a reasonable knowledge of the contexts in which these *tranchets* were used. Nearly all of them were found in upland settlements with evidence of local bronze production. It seems certain that they date from the 11th–9th centuries, the last stages of the late Bronze Age.

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