

## Plate *f* of the Gundestrup “cauldron”: symbols of spring and fertility

David Alexander NANCE



DIRECTEUR DE LA PUBLICATION : Bruno David,  
Président du Muséum national d'Histoire naturelle

RÉDACTRICE EN CHEF / EDITOR-IN-CHIEF: Joséphine Lesur

RÉDACTRICE / EDITOR: Christine Lefèvre

RESPONSABLE DES ACTUALITÉS SCIENTIFIQUES / RESPONSIBLE FOR SCIENTIFIC NEWS: Rémi Berthon

ASSISTANTE DE RÉDACTION / ASSISTANT EDITOR: Emmanuelle Rocklin (anthropo@mnhn.fr)

MISE EN PAGE / PAGE LAYOUT: Emmanuelle Rocklin, Inist-CNRS

COMITÉ SCIENTIFIQUE / SCIENTIFIC BOARD:

Cornelia Becker (Freie Universität Berlin, Berlin, Allemagne)  
Liliane Bodson (Université de Liège, Liège, Belgique)  
Louis Chaix (Muséum d'Histoire naturelle, Genève, Suisse)  
Jean-Pierre Digard (CNRS, Ivry-sur-Seine, France)  
Allowen Evin (Muséum national d'Histoire naturelle, Paris, France)  
Bernard Faye (Cirad, Montpellier, France)  
Carole Ferret (Laboratoire d'Anthropologie Sociale, Paris, France)  
Giacomo Giacobini (Università di Torino, Turin, Italie)  
Véronique Laroulandie (CNRS, Université de Bordeaux 1, France)  
Marco Masseti (University of Florence, Italy)  
Georges Métaillé (Muséum national d'Histoire naturelle, Paris, France)  
Diego Moreno (Università di Genova, Gènes, Italie)  
François Moutou (Boulogne-Billancourt, France)  
Marcel Otte (Université de Liège, Liège, Belgique)  
Joris Peters (Universität München, Munich, Allemagne)  
François Poplin (Muséum national d'Histoire naturelle, Paris, France)  
Jean Trinquier (École Normale Supérieure, Paris, France)  
Baudouin Van Den Abeele (Université Catholique de Louvain, Louvain, Belgique)  
Christophe Vendries (Université de Rennes 2, Rennes, France)  
Noëlie Vialles (CNRS, Collège de France, Paris, France)  
Denis Vialou (Muséum national d'Histoire naturelle, Paris, France)  
Jean-Denis Vigne (Muséum national d'Histoire naturelle, Paris, France)  
Arnaud Zucker (Université de Nice, Nice, France)

COUVERTURE / COVER:

*Cuculus canorus* Linnaeus, 1758. Photo: Mike McKenzie.

*Anthropozoologica* est indexé dans / *Anthropozoologica is indexed in:*

- Social Sciences Citation Index
- Arts & Humanities Citation Index
- Current Contents - Social & Behavioral Sciences
- Current Contents - Arts & Humanities
- Zoological Record
- BIOSIS Previews
- Initial list de l'European Science Foundation (ESF)
- Norwegian Social Science Data Services (NSD)
- Research Bible

*Anthropozoologica* est distribué en version électronique par / *Anthropozoologica is distributed electronically by:*

- BioOne® (<http://www.bioone.org>)

*Anthropozoologica* est une revue en flux continu publiée par les Publications scientifiques du Muséum, Paris, avec le soutien du CNRS.

*Anthropozoologica* is a fast track journal published by the Museum Science Press, Paris, with the support of the CNRS.

Les Publications scientifiques du Muséum publient aussi / The Museum Science Press also publish:

*Adansonia*, *Zoosystema*, *Geodiversitas*, *European Journal of Taxonomy*, *Naturae*, Cryptogamie sous-sections *Algologie*, *Bryologie*, *Mycologie*.

Diffusion – Publications scientifiques Muséum national d'Histoire naturelle

CP 41 – 57 rue Cuvier F-75231 Paris cedex 05 (France)

Tél.: 33 (0)1 40 79 48 05 / Fax: 33 (0)1 40 79 38 40

diff.pub@mnhn.fr / <http://sciencepress.mnhn.fr>

© Publications scientifiques du Muséum national d'Histoire naturelle, Paris, 2019

ISSN (imprimé / print): 0761-3032 / ISSN (électronique / electronic): 2107-08817

# Plate *f* of the Gundestrup “cauldron”: symbols of spring and fertility

David Alexander NANCE

Department of Geography and Environment  
University of Aberdeen, School of Geosciences,  
St. Mary’s Building, Elphinstone Road, Aberdeen AB24 3UF (Scotland)  
davidnance@live.co.uk

Submitted on 19 November 2018 | Accepted on 9 July 2019 | Published on 18 October 2019

Nance D. A. 2019. — Plate *f* of the Gundestrup “cauldron”: symbols of spring and fertility. *Anthropozoologica* 54 (14): 141-150. <https://doi.org/10.5252/anthropozoologica2019v54a14>. <http://anthropozoologica.com/54/14>

## ABSTRACT

The Gundestrup “cauldron” is a late Iron-Age silver ceremonial vessel found in Denmark in 1891. The busts depicted on the seven outer-plates – one is missing – are thought to represent deities but have not been confidently identified. This paper identifies the species of the birds on plate *f* and its symbolism allowing identification of the deity, the depicted event and its religious significance. The birds have the distinctive zygodactyl foot-morphology of the common cuckoo (*Cuculus canorus* Linnaeus, 1758). This species is also identified on a number of other widespread European artifacts where it was previously thought to be a bird of prey. The plate depicts a goddess in triplicate flanked by two cuckoos releasing the first cuckoo of spring. The bird is an obligate brood-parasite, laying its eggs in other birds’ nests, leading to misconceptions of its life cycle: no females, nests or identifiable eggs. It was assumed the male birds mated with the host females. Hence, the cuckoo symbolized male fertility across its Eurasian summer range and was associated with several widespread European goddesses of fertility who were probably also associated with mead and the planet Venus. The evidence presented strongly suggests that these deities were known in the Bronze Age.

**KEY WORDS**  
Gundestrup cauldron,  
prehistoric religion,  
cuckoo,  
goddess,  
Venus.

## RÉSUMÉ

*Plaque f du « chaudron » de Gundestrup: symboles du printemps et de la fertilité.*

Le “chaudron” de Gundestrup est un vase d’argent datant de la fin de l’Âge de Fer, découvert au Danemark en 1891. Les bustes représentés sur les sept plaques extérieures, dont l’une est manquante, sont censés représenter des divinités mais n’ont pas été identifiés avec certitude. Cet article détermine les espèces d’oiseaux sur la plaque *f* et leur symbolisme permettant d’identifier la divinité, l’événement décrit et sa signification religieuse. Les oiseaux ont la morphologie distinctive du pied zygodactyle du coucou commun (*Cuculus canorus* Linnaeus, 1758). Cette espèce est également identifiée sur un certain nombre d’autres artefacts européens répandus, sur lesquels elle était auparavant considérée comme un oiseau de proie. La plaque représente une déesse en triple exemplaire, flanquée de deux coucous et libérant le premier coucou du printemps. L’oiseau est un parasite de nichée, la femelle pondant ses œufs dans les nids d’autres oiseaux, les nids ou œufs ne sont donc pas identifiables. Cela a fait naître des idées fausses sur son cycle de vie, notamment que les oiseaux mâles s’accouplaient avec les femelles hôtes. Ainsi, le coucou symbolisait la fertilité masculine dans son aire estivale eurasiennne et était associé à plusieurs déesses européennes de la fertilité largement répandues, probablement affiliées à la planète Venus. Les preuves présentées suggèrent fortement que ces divinités étaient connues à l’Âge du Bronze.

**MOTS CLÉS**  
Chaudron de  
Gundestrup,  
religion préhistorique,  
coucou,  
déesse,  
Vénus.



FIG. 1. — The Gundestrup “cauldron”, plate *f* is facing (© National Museum of Denmark, photo Kim Bach).

## INTRODUCTION

The Gundestrup “cauldron” (Fig. 1) was found dismantled in a peat bog in Jutland, Denmark, in 1891 (Fig. 2). It is not a cauldron but a ceremonial container consisting of sixteen silver components: a bowl, seven square outer plates, identified as *a* to *g*, portraying busts of a probable pantheon of four male and three female deities (Rowlett 1993), with the plate of a presumed female deity missing, and five inner rectangular panels, A to E, thought to depict narratives. There are also two pieces of silver tube from the rim and a piece of iron from a ring originally placed inside the tubes. They have been re-assembled into a cauldron 69 centimetres in diameter and 42 centimetres high. In addition, a 25 centimetres diameter circular decorated plate, possibly a phalera or horse-harness ornament (Taylor 1992), was soldered inside the bowl to cover a hole (Larsen 1987). This paper focuses on plate *f*. The recognition of the bird species portrayed and its symbolism has enabled the identification of the attributes of the female deity and an associated religious concept.

The iconography, religion, origin and dating of the cauldron have been dealt with many times with highly divergent results (Nielsen *et al.* 2005). The figures on the outer plates have not been identified with any confidence as, according to Bober (1951: 13) “indigenous Celtic divinities are manifestations of religious concepts that can be approached only indirectly, given the lack of native sources and the extremely

limited figural representations from La Tène art”. There are also contradictory interpretations of the inner panel narratives: a lost Celtic tale (Hatt 1965) or a lost Thracian tale (Kaul *et al.* 1991), while Olmsted (1979) suggested they represented a Gaulish version of the Irish epic *Táin Bó Cúailnge*, “Cattle raid of Cooley” (Fig. 2), possibly set in the first century AD and roughly contemporary with the cauldron’s fabrication, a hypothesis rejected by others (Bergquist & Taylor 1986: 269).

All locations mentioned in this paper, with the exceptions of Gundestrup and Agighiol, are within the area occupied by people speaking Celtic languages (Fig. 2). While language is not the sole criterion for ethnicity, it is one of the key components and it is thought indisputable that in Iron Age Europe the speaking of a Celtic language was, to a greater or lesser extent, correlated with specific forms of social organisation, cultural expression and religious practice (Forsyth 1997: 6). The cauldron is thought by some to have been fabricated within a Celtic cultural context (Klindt-Jensen 1960: 50; Allen 1971: 20; Powell 1971: 205). Some have narrowed the location to northern Gaul (Klindt-Jensen 1959; Olmsted 1979; Hachmann 1990; Rowlett 1993). The vessel is shaped like Celtic cauldrons and the helmets and war trumpets (*carnyces*) are also Celtic in style (Kaul 2006). Klindt-Jensen (1959), using stylistic analysis, determined that the objects depicted were of the later La Tène style that fitted naturally into the cultural context of northern Gaul and suggested a fabrication date of the first century BC.

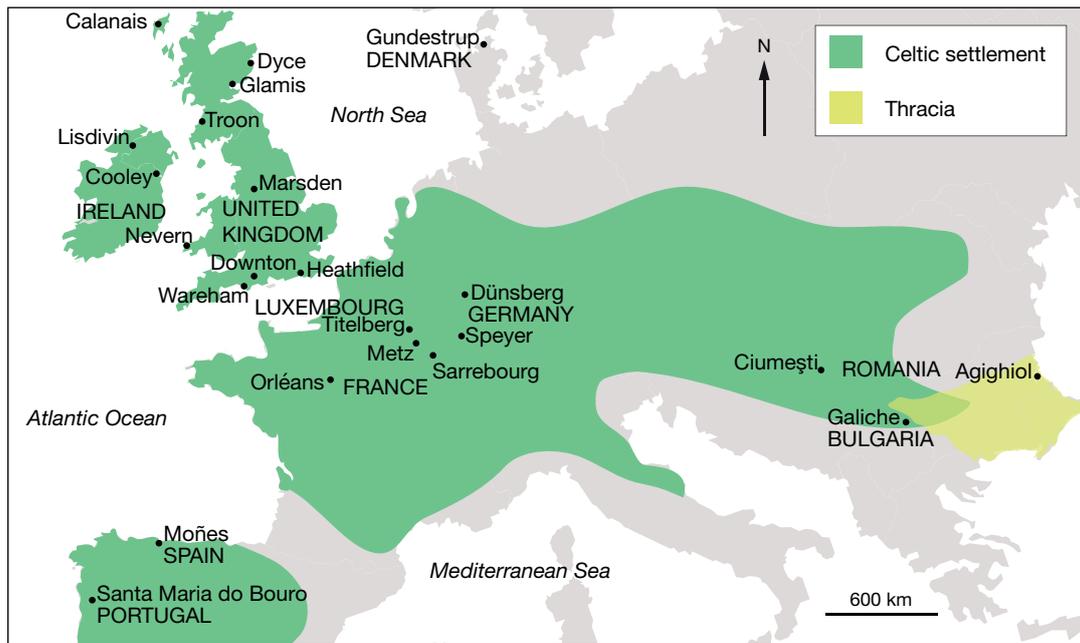


Fig. 2. — Map of locations mentioned in the text with areas of maximum Celtic settlement (from Haywood 2001) and the Roman province of Thracia.

Olmsted (1979) combined stylistic with coin analysis and considered fabrication occurred between 80 and 50 BC possibly near Orléans (Fig. 2). Others have proffered dates that vary between 200 BC and AD 300 as none of the objects can be dated exactly and the different motifs on the cauldron are difficult to categorise chronologically (Nielsen *et al.* 2005).

Conversely, the standard and style of repoussé workmanship suggested an origin in Thrace. While most torcs on the cauldron were Celtic in style, two were of a type known in south-east Europe while the method of indicating fur by punch marks has parallels in the Rogozen treasure found in north-western Bulgaria but dated to the fourth century BC (Boev 2018: 5). The approximately nine kilogramme weight of the cauldron's components was also claimed to match integers of 11.2 gramme Persian *sigloi* coins (Taylor 1992). However, subsequent metalurgical analysis indicated that the vessel was manufactured not in Thrace of Persian silver but somewhere in Central or Western Europe (Nielsen *et al.* 2005; Jouttijärvi 2009). Analysis of the phosphorus content of the iron ring precluded it being made from Danish bog iron (Nielsen *et al.* 2005). Lead-isotope analysis of the solder indicated that the tin was from Cornwall, while results of similar analysis of the silver lay between those of two groups of Celtic silver coins: the quinars of the oppidum of Dünsberg (Fig. 2) and first century BC Curiosolite coins from Brittany. Nielsen *et al.* (2005) concluded the probable origin was from the “pool” of silver used in coins of what is now northern France and southern Germany but was in the area of La Tène culture. It has been speculated that these Celtic and Thracian elements were combined by Thracian craftsmen fabricating for Celtic customers (Bergquist & Taylor 1986: 268), which does not preclude a fabrication in northern Gaul by itinerant Thracian artisans, or in a territory where both groups co-existed (Kaul 2006). The Celtic Scordisci and Thracian Triballi coexisted in

modern day Serbia and it has been supposed without evidence that the cauldron originated somewhere there and was acquired by the Germanic Cimbri who took it to Denmark (Kaul 2006).

Rowlett (1993) had earlier demonstrated that the cauldron had stylistic similarities with several unfinished silver items found at Titelberg, a first century BC *oppidum* of the Belgic *Treveri* in northern Gaul (Fig. 2), situated within a core territory of La Tène culture (Haywood 2001) and within the area where the silver was used. There was native silver-working and a mint at Titelberg, later used by the Romans after Caesar's conquest of the Belgae in 57 BC (Rowlett 1993). Both provenances are challenged. The Thracian silversmiths flourished in the fifth and fourth centuries BC (Rowlett 1993), at least three centuries before the cauldron was fabricated and, according to Taylor (1992), there is an absence anywhere in north-western Europe of any tradition of repoussé work in sheet silver. Rowlett (1993) disputes this stating that embossing of metal was well-known to craftsmen of the *Treveri* territory from the beginning of La Tène period and that such techniques, contemporary with the cauldron's fabrication, have also been demonstrated in northern Iberia.

The principal focus of plate *f* is a female figure holding a bird between finger and thumb. She and a smaller figure both wear torcs. Another female without a torc braids the hair of the main figure (Fig. 3). A dog lies beneath her right breast and a one-armed man lies recumbent across her left: he is discussed in a separate paper. A feline is extended vertically, evidenced by the extended claws and comparatively long tail length (65 per cent of the head and body length in cats as opposed to 35 per cent in dogs). Two birds with open wings heraldically flank the central figure above her shoulders, previously identified as eagles (Green 1992) or ravens (Olmsted 1979). Olmsted (1979) proposed that the figures represented an Irish goddess: the Morrigan or Ériu, who materialise as a crow or raven, or Medb, a goddess



FIG. 3. — Plate *f* of the Gundestrup “cauldron”. (© Kit Weis, National Museum of Denmark). Scale bar: 10 cm.



FIG. 4. — The common cuckoo (*Cuculus canorus* Linnaeus, 1758) showing zygodactylic foot arrangement (© Mike McKenzie).

of war, sovereignty and fertility. Alternatively, he proposed a “mistress of the underworld”, Rhiannon of the Welsh epic the *Mabinogion*, also mentioned with birds. Olmsted (1979) equated her with the Gallo-Roman horse goddess Epona. Taylor (1992) thought a phalera from Pakistan depicting a woman with birds at her shoulder was analogous and supported the hypothesis that Indian iconography had diffused to influence that of the cauldron and again linked her to Rhiannon.

## ANALYSIS

The absence of text suggests that the silversmiths and/or their patrons were illiterate. Before Greek artists introduced letters to mythological narratives, they demonstrated both the attributes of the subject and an unmistakable situation



FIG. 5. — The horsed figure with bird helmet on panel *e*, also showing phalerae (Flemming Kaul, © National Museum of Denmark).

(Hanffman 1957). Those techniques are used on plate *f* where the three females probably represent a goddess in triplicate. This, combined with the attributes of a cat, dog and a bird above each of her shoulders, would have identified the trio to a knowledgeable audience. The unmistakable situation is the central figure releasing a bird that also dated the event in the cosmic year (discussed below). An additional technique was to exaggerate characteristics that aided identification; for example, the two heraldic birds at the top of the plate are each represented with only one disproportionately short, unjointed leg and an outsized foot drawing attention to it. Olmsted (1979) thought it represented the tail but this is omitted, further emphasising the foot viewed from the side.

The most common bird foot-morphology has three forward facing toes (anisodactyly). Those on the plate have feet that are zygodactylic with the two inner front toes pointing forward and the outer facing backward. Three groups of European birds have obligate zygodactyly: cuckoos, woodpeckers and some owls (Olson 1983). As the birds clearly do not represent owls or woodpeckers, they must represent the common cuckoo (*Cuculus canorus* Linnaeus, 1758) (Fig. 4). The moderately curved beak of the cuckoo is exaggerated in the upper birds to preclude it being interpreted as the straight beak of a woodpecker.

The bird in the hand has the moderately curved bill of the insectivorous cuckoo, more proportionate legs but the same foot morphology, contradicting Olmsted’s conjecture that it represented the tail of the upper birds. The silversmith has left an unambiguous feature that clearly demonstrates that the bird in the hand is the same species as the two upper birds (Fig. 3). Pre-Roman bronze and gold coins with a similar motif have been identified from several tribes of Northern Gaul: Carnutes, Venuti and Bellovaci (Olmsted 1979: 79).

Olmsted (1979: 79) thought the bird on the head of the horsed figure on panel *E* of the cauldron was the same as that in the hand but representing a bird of prey, although it does not have the beak of a raptor (Fig. 5). A similar bronze bird-

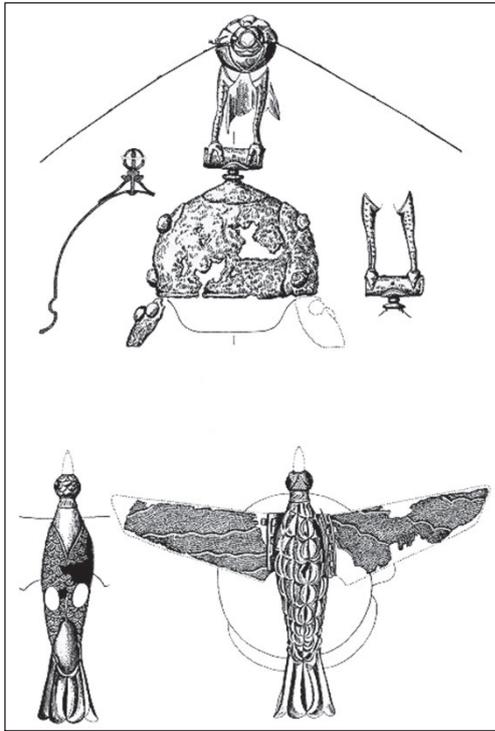


FIG. 6. — Bird helmet from Ciumești, Romania, second century BC, with zygodactylic feet (from Rusu 1971).

helmet is known from a grave in Ciumești, Romania (Fig. 2) dated to the second half of the third century BC, speculated to have belonged to a Celtic mercenary (Rustoiu 2012). The bird has been described as a raven or raptor (Rustoiu 2012). However, it does not have the raven's broad head and neck, thick bill and characteristic diamond-shaped tail; the wings of a falcon or a raptor's forward-facing eyes (Fig. 6). It is perched with zygodactylic feet and probably represents a cuckoo.

The bird in the hand and the bird on the horsed figure appear to be combined in a possible bird-headed mounted figure holding an opened-winged bird in its right hand on the gold "diadem" (Fig. 7) from Moñes, Asturias (Fig. 2) thought to date around 125 BC (Quintela 2005). Nearby at Santa Maria de Bouro, a Marian sanctuary in northern Portugal (Fig. 2), a statue of *Senhora da Abadia*, "Our Lady of the Abbey", holds the Christ-child, who, in turn, holds what appears to be not a dove but a cuckoo (Da Silva 2004) suggesting a syncretised pre-Christian deity. Both are in an area of La Tène culture (Haywood 2001) where Hispano-Celtic languages were spoken when the cauldron was constructed. A Celtiberian inscription on a bronze plaque has a dedication to the god Lugus (Kaul 2006) who was also known in Ireland, Britain and Gaul indicating all these Celtic speaking peoples shared a similar pantheon.

Taylor's hypothesis that the iconography on the phalera from Rawalpindi is the same as plate *f* would not appear accurate as the birds are not on the figure's shoulders and the beaks and long tails suggest that they are parrots, which occur in Rawalpindi. However, there are artefacts with similar iconography including the Galiche phalera (Fig. 8) from

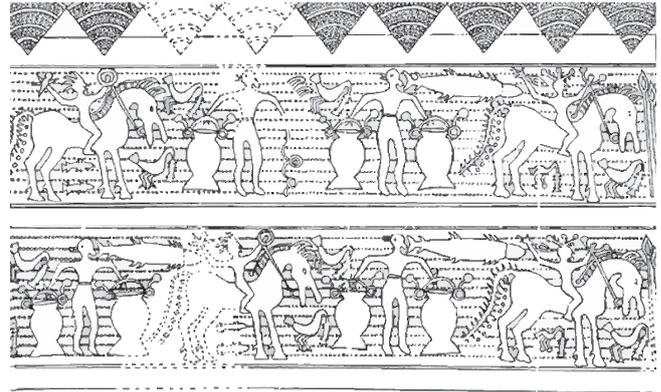


FIG. 7. — Representation of the Moñes diadem. Note the horsed figure holding a bird (after López Monteagudo 1977).



FIG. 8. — A phalera from Galiche, Bulgaria (after Boev 2018).

Bulgaria (Fig. 2) where the female figure, also with braided hair, has a bird on each shoulder. The birds' features of longer necks, short legs and beaks, and eyes that are clearly ringed, also correspond with those of the common cuckoo (Fig. 4; Zlatozar Boev pers. comm.).

## DISCUSSION

### THE COMMON CUCKOO

The common cuckoo is an obligate brood parasite: it lays its eggs in other species' nests exclusively. The birds overwinter in sub-Saharan Africa and arrive in Europe up to the Arctic Circle and across Asia to Kamchatka in late spring and are the heralds of summer across much of this range. Until migration was understood, the birds would have appeared from nowhere just as the leaves of summer were breaking. In rural areas of Europe, the bird is described as "awakening" or "resurrected" (Méchin 2001: 25). The birds are secretive and both sexes are

indistinguishable to the untrained eye. Cuckoos exist in distinct clades that target specific host species. Each clade has evolved to lay eggs that closely mimic those of its host and the hosts have coevolved to recognise and reject them – a “biological arms race”. Shortly after hatching, the young cuckoo ejects all the host’s eggs or hatchlings from the nest. Consequently, to the rustic observer there were no female cuckoos, nests or recognisable eggs. A few weeks after the appearance of the cuckoo, several hosts’ nests, each containing only a single young cuckoo, would be found in the territory of one calling, polygynous male cuckoo, as each female can lay over 20 eggs each season. These observations might have seemed supernatural to the superstitious mind and indicated that all the birds were male and, as Gubernatis (1872: 231) supposed “The male cuckoo united itself in adultery with the strange female bird to which it afterwards confided the eggs, which would thus be bastard eggs of the female itself that sits on them”, the male host-bird being cuckolded.

The cuckoo was the bird of the Greek goddess Hera. Pausanias (2.17.4; Jones & Ormerod 1918) in the second century AD wrote that a statue of Hera seated on a throne had a sceptre with a cuckoo on its end which referred to Zeus changing into this bird, caught by Hera as a pet. Hera was a maiden (virgin) and the implication is that Zeus raped her. Lai (1988) interpreted this myth as signifying that the cuckoo projected phallic prowess. Gubernatis (1872: 232) had previously recorded that the bird had phallic symbolism. Unlike this early recorded myth, others about the cuckoo, some quoted below, were first recorded in the nineteenth and twentieth century. There is no direct evidence that they were extant two millennia ago. However, recent empirical studies have concluded that methods and theory from population genetics can be usefully applied to characterize the population structure and variation in cultural packages such as folktales (Ross *et al.* 2013). Such methods have demonstrated that while some cosmic myths are Palaeolithic in origin (Huy 2013) various Indo-European folktales have been demonstrated to have a Bronze Age origin (Graça da Silva & Tehrani 2016).

Due to its arrival as the summer vegetation was emerging, perceived male-only gender, conceived virility, promiscuity, libido and subsequent fertility, the cuckoo represented male fertility across its summer range from Denmark (Armstrong 1958) to China where it is the bringer of spring and the symbol of both deceit and fertility (Lai 1988). From Northern Europe to Turkey the cuckoo was associated with the spring sap of plants (Méchin 2001). The *Senhora da Abadia*, associated with a cuckoo and mentioned earlier, has a more significant name, *Senhora da Goma*, “Lady of Sap” (Da Silva 2004: 282). In addition to being the symbol of male sexuality the cuckoo was also associated with both natural and agricultural fertility and abundance. For example, until the nineteenth century English farmers thought it necessary to sow barley when the earliest note of the cuckoo was heard to ensure a full crop (Ingersoll 1923: 225). Crawford (1910: 20), in his introduction to the Finnish epic the *Kalevala*, where the bird is often referred to as sacred, commented that in Finland “The cuckoo to this day is sacred, and is believed to have fertilized

the earth with his songs” suggesting not merely that the bird emerged in spring, but that without him there could be no spring. Similarly, in Scotland the first cuckoo to arrive each year on Lewis in the Outer Hebrides was believed to fly straight to the central stone of the Calanais stone ring and call from there (Swire 1966: 25) indicating a locus where the annual greening of the vegetation would start. Analogous myths have been Christianised at Nevern, Wales where the first cuckoo of the year would alight on a stone cross on the feast day of the local saint, and similarly at the Gowk Stone at Lisdivin, Northern Ireland (Rutherford 1953) – *gowk* is Old English for “cuckoo”. Such locations would appear to be local *axes mundi*, “centres of the world”, a function attributed to similar monuments in Orkney (Richards 1996).

Fields named cuckoo-pen in southern England are located at places in the landscape with specific geographic and cultural features (Field 1913; Rawes 1977). They were thought to be cult-sites associated with pagan seasonal rituals (Rawes 1977) or sacred groves (Field 1993). These subjective observations were tested against a wider sample of English, Brittonic and Gaelic cuckoo place-names using statistical analysis and Geographic Information System (GIS; Nance 2019). Several geographic and cultural features were statistically very significantly associated with cuckoo place-names when compared with random locations and the same features were very significantly associated with cuckoo and gowk standing stones when compared with a randomly selected group of standing stones. However, there was no significant difference between cuckoo stones and other cuckoo place-names indicating these other cuckoo place-name locations were initially associated with the bird at the same time the stones were erected in the Early Bronze Age. One associated feature was Roman roads and forts indicating these locations were tribal religious sites targeted by Roman forces during the conquest phase, a conclusion supported by an independent GIS geoprocessing analysis. Field (1913) and Rawes (1977) thought such locations associated with the myth of the pent cuckoo, where the bird is banked-in or penned in an attempt to keep the summer. Grimm (1883: 681) thought places named after the cuckoo in Germany referred to the bird “in a mystic sense which has fallen dark to us now” and were associated with similar myths. Such locations might also have been regarded as *axes mundi*.

The date of the cuckoos’ arrival was significant across its range. 22 April to 21 May was *Gaukmánuður*, “cuckoo month”, in the Nordic calendar and referred to in the *Prose Edda* (Sturluson & Brodeur 1916: 225). In Norway and Iceland, a *Gaukmesse*, “cuckoo mass”, was celebrated on 23 April: the second day of *Gaukmánuður*. The month of May is also named *Gegužė*, “cuckoo”, in Lithuania. The cuckoo was said to arrive at the Wareham Spring Fair in Dorset on six April (Harte 1986) and on the seven April at Nevern. The bird was also said to arrive at the fairs of Downton in Wiltshire, Marsden in Yorkshire (Harte 1986) and Heathfield in Sussex (Fig. 2) suggesting they too were gatherings at local *axes mundi*. The fairs might originally have been religious gatherings occurring after hearing the first cuckoo although the date would have been locally and inter-annually variable.

When Britain adopted the Gregorian calendar in 1752 the Julian calendar was corrected by adding eleven days. Hence, the date of the cuckoo's supposed arrival at Wareham and Nevern on six and seven April corresponded to 26 and 27 March. The 25 March was the date of the vernal equinox and of the New Year in the Julian, changed to one January with the adoption of the Gregorian. In Romania the 25 March is *ziua cucului*, “day of the cuckoo” (Ghinoiu 1995: 463). The event depicted on plate *f* might have been formalised with a festival at the beginning of the agricultural New Year near the vernal equinox. This suggests that the eight putative deities on the cauldron's plates may each be associated with one of the eight quarter and cross-quarter days, known to be significant in the calendars of Celtic societies.

#### THE GODDESS

The conceived links with male sexuality and fertility indicate why the cuckoo was the bird of several European fertility goddesses in triplicate: Freyja/Frigg (Guerber 1895: 130), Laima, a goddess of the Balts (Gimbutas 1989: 97), Hera and possibly the Latin Juno. This is either due to lateral transmission, possible between Hera and Juno; the association having arisen independently at least three times or these goddesses evolved from a common ancestor. Several of these deities, widespread in Europe, are also associated with fertility, mead (discussed below) and the planet Venus indicating a common ancestor is the more probable hypothesis.

There are more extant myths in Europe associated with the common cuckoo than with any other bird (Ingersoll 1923: 154). One recalls the association between a woman and cuckoo in southern England. A quaintly-dressed old lady is said to turn up at the annual Cuckoo Fair at Heathfield to release the first cuckoo of summer from her basket. It appears to be a variant of the myth referred to by Tillhagen (1978: 162) who wrote that in Sussex an old lady has all the cuckoos. Every spring she fills her apron with them, and when she is in a good mood she releases them. It is this myth that appears to be depicted on plate *f* and dates it to the annual arrival of the first cuckoo. It could be a Germanic association of Frigg and the cuckoo brought from Continental Europe by the Anglo-Saxons, although, if so, it might be expected that the myth would be more widespread throughout England. However, this area was earlier settled by Belgic tribes.

If plate *f* was fabricated in northern Gaul and the figures represent a regional goddess then a later, local Gallo-Roman fertility goddess may be expected to have developed from her: one of a divine couple, associated with the cuckoo. Three altars to the east and southeast of Titelberg appear to record her. An altar dedicated to the divine couple Nantosuelta and Sucellos was found at Sarrebourg (Fig. 2) in the former territory of the Belgic *Mediomatrici*. The goddess has a bird at her feet in low relief previously speculatively interpreted as a raven but it has an apparent zygodactylic foot. She holds a sceptre with what might be a contemporary domestic *horreum* (Roman granary) on it. Reinach (1922: 219) dated this altar to the end of the first or start of the second century AD: over a century after Caesar conquered the Belgae in 57 BC. Another

image of a single female holding a sceptre with a *horreum* appears on an altar in Metz (Fig. 2). There was no mention of her title in the inscription but due the similarities with the Sarrebourg figure she is presumed to be Nantosuelta. Another relief from Speyer (Fig. 2) has a female figure similarly dressed with a structure on a sceptre and unidentified bird(s) at her feet in low relief. The *horreum* suggests she was a goddess of fertility/abundance and the associated zygodactyl footed bird is most probably a cuckoo.

The myth from Heathfield is the only direct evidence of an association between the cuckoo and a British or Irish goddess. However, recension one of the *Táin Bó Cúailnge* mentions that Medb, who Olmsted thought was depicted on plate *f*, had two birds on her shoulders, one of which the warrior Cúchulainn killed as well as her “marten” (O’Rahilly 1976) or “lapdog” (Olmsted 1979). As Medb was associated with fertility the birds might well have been cuckoos and her lapdog correspond with the dog on plate *f*. The birds on plate *f* are above the figure's shoulders to allow a clear depiction of their feet although she could have been described as having two cuckoos on her shoulders like the figure on the Galiche phalera indicating a widespread association of the cuckoo with a female figure across territory occupied by Celtic speaking peoples. The other goddess suggested that might be represented on plate *f*, Rhiannon (Olmsted 1979; Taylor 1992), had song-birds that sang so sweetly that they could raise the dead (Ross 1967: 339). This does not appear to describe the repetitive two-tone call of the male cuckoo but is suggestive of a deity of the Underworld.

Goddesses of fertility must themselves be fertile and have a male consort (Frazer 1922: 13). Equally, he must epitomise male fertility. These divine couples are well represented in Celtic religion (Green 1986: 95). The goddess on plate *f* presumably had a consort who might also be depicted on the cauldron. Divine couples associated with the cuckoo include Hera and Zeus, Freyja and the fertility god Freyr. Medb had many successive mortal kings for husbands but one principle divine lover: Fergus mac Róich (“man-strength [virility] son of the great stallion”) and they are described in the *Táin* as having almost insatiable sexual appetites. Fergus and Medb have been syncretised as the saints Fergus and Meddan in Scotland. They were the pre-Reformation parish saints in the adjacent parishes of Dyce and Fintray, Aberdeenshire, and Glamis and Airlie in Angus (Fig. 2). She was also the parish saint in Troon (Fig. 2).

Medb is derived from the element for mead and translates as “drunk woman” (Ross 1967) associated with the cup of mead shared with a new king as she also symbolised sovereignty. Brythonic Meddan has the same root and in modern Welsh *meddwen* describes a drunken woman. In Norse mythology Freyja was of the Vanir (“white, bright” as the Latin Venus [Grimm 1883: 444]), fertility deities, who battled with the Æsir gods. The poem *The Völuspá* of *The Poetic Edda* describes how, during the war, Freyja, as *Gullveig*, was burned and reborn three times (Bellows 1923) indicating a goddess in triplicate while *gull*, “gold,” and *veig*, “alcoholic drink, intoxication” (Simek & Hall 1993: 123), confirm her link with mead.

There is a cosmic link between a goddess and the cuckoo. The cuckoo is linked with the Pleiades across central and northern Europe (Méchin 2001) and both were perceived as keepers of cosmic time (Méchin 2001; Sparavigna 2008). The Pleiades' risings and settings have been used to regulate agricultural calendars, festivals, and rituals. Both Freyja-Frigg and Hera were associated with the both cuckoo and the planet Venus and described as the "Queen of the Heaven" (Guerber 1895; Powell 1995). Although it was Aphrodite's planet in the classical period, Pseudo-Hyginus (*Astronomica* 2.42; Grant 1960) wrote in the second century AD "The fourth star is that of Venus, Luciferus [the Morning Star] by name. Some say it is Juno's [Hera's] before Aphrodite arrived from the east". It seems probable that the cosmic elements were primary and archaic.

The artefacts that depict female figures associated with the cuckoo were widespread across "Celtic" mainland Europe including northern Iberia. The evidence presented also suggests that the association also occurred in the British Isles, Scandinavia, Greece and the Baltic indicating that the original goddess predates the late Iron Age of the cauldron. Artefacts portraying women with birds can be dated to the late Bronze Age in Europe (Kossack 1954; Olmsted 1979) specifically the proto-Celtic Urnfield culture (1300 to 750 BC) (Ross 1967: 315). Around the same time, Hera is recorded in Mycenaean linear script B tablets (1150 to 1450 BC), although the later Aphrodite is not (O'Brien 1993; Marcovich 1996) suggesting the Mycenaean dove goddess ornaments found in Mycenae and dated to the sixteenth century BC (Marcovich 1996: 51) is Hera surrounded by cuckoos. Early iconography of Hera suggests an Asian fertility goddess (O'Brien 1993). Klindt-Jensen (1959) also proposed that the folded arms of the female figures on the Gundestrup cauldron represent "a submerged memory of the characteristic gesture of an Oriental fertility goddess". This suggests an ancestral female deity associated with the cuckoo, fertility, possibly with mead and personifying the planet Venus arrived in Europe during the early Bronze Age. This hypothesis predicts that such a deity must have existed in Britain during the Bronze Age. A cosmic myth that links both the Pleiades and Venus to Calanais and is associated with the alignment of a crossover event of Venus that occurred about 1670 BC is discussed in a separate paper.

Aphrodite, who replaced Hera as the deity of the planet Venus sometime after 1200 BC (Marcovich 1996: 46), and Ashtar, Ashtoret, Ashtoreth and Astarte had the same characteristics and are descendants of the Sumerian goddess Inanna associated with Venus, referred to as the "Queen of Heaven" and first recorded about 3000 BC (Marcovich 1996: 45). Inanna's resemblances to Greek deities of the Bronze Age has been noted previously (Wolkenstein & Kramer 1983). She was an early third millennium hypersexual goddess of fertility, love, war and political power (Marcovich 1996) – an earlier version of the Irish Medb. This suggests that both the European and Asiatic goddesses descended from a common ancestral goddess.

Sumerian was a language isolate. During the third millennium the Sumerians began to use the Semitic language Akkadian and Inanna became Esh-tar (Astarte). Several Sumerian place-names, river names and occupations are not Sumerian or Akkadian in origin but introduced by an earlier population that brought farming into southern Iraq from the Zagros Mountains in the north during the Early Ubaid period (5300 to 4700 BC) who spoke a Proto-Euphratean language (Kramer 1963: 40). One of the characteristics of Proto-Euphratean is the use of repeated syllables in personal names suggesting Inanna was their deity and travelled with them. This hypothesis suggests that such a deity was known in the Neolithic. While an ancestral goddess had the common associations with fertility, sex, love, war and the planet Venus, the deities from Inanna to Aphrodite had the dove as their bird, not the cuckoo.

The cuckoo does not breed in Mesopotamia or the Levant but breeds in the Zagros Mountains and further north (Payne *et al.* 2005; Fossey *et al.* 2016). It is similar in size and shape to the Eurasian collared dove (*Streptopelia decaocto* Frivaldszky, 1838) (Serry *et al.* 1998: 231) which occurs in Mesopotamia (Baptista *et al.* 1997) and with which it is sometimes confused as both species have the silhouette of a sparrowhawk, a bird the cuckoo mimics. In addition, the cooing calls of the collared dove in early spring can be mistaken for the call of the cuckoo (Cramp 1985). The cuckoo would have been known to the farmers of the Zagros Mountains who brought Inanna with them to Mesopotamia but not their Sumerian descendants who replaced it with a local substitute that resembled it. Astarte and Aphrodite retained the dove and the association with love but the link with spring was lost as the dove does not migrate. The figures on plate *f* represent the La Tène descendants of the ancestral deity. This suggests the recumbent man on the plate may be an equivalent of the mortal companions of Inanna and Astarte, Dumuzi and Adonis, representing fertility but who also maintained an original association with the cuckoo.

## CONCLUSIONS

Plate *f* depicts a goddess in triplicate releasing the first cuckoo of spring on or about the spring equinox. They are La Tène symbols of spring and fertility but the association of a goddess in triplicate with the cuckoo appears to have been widespread across Europe.

The cuckoo was the symbol of male fertility across most of its summer range and believed to be the initiator of annual growth and abundance.

The identification of the cuckoo on the cauldron has allowed a reconstruction of prehistoric religious beliefs. There are other biological motifs on the cauldron that have not been conclusively identified. Further study would be fruitful.

The evidence presented does not contradict the hypothesis that several European goddesses are descended from a common Bronze Age ancestor. They are variously linked with the cuckoo, mead, sovereignty, fertility, abundance and sex, and personify the planet Venus.

## Acknowledgements

My thanks to Mike McKenzie, Kit Wies and the National Museum of Denmark for permission to use their photographs. I also appreciate the helpful comments I received from the reviewers, Olivier Buchsenschutz and Nathalie Ginoux, and the editors of this manuscript.

## REFERENCES

- ALLEN D. F. 1971. — The Sark hoard. *Archaeologia* 103: 1-31. <https://doi.org/10.1017/S0261340900013849>
- ARMSTRONG E. A. 1958. — *The Folklore of Birds: an Enquiry into the Origin and Distribution of some Magico-Religious Traditions*. Collins, London, 272 p.
- BAPTISTA L. F., TRAIL P. W., HORBLIT H. M., BOESMAN P., GARCIA E. F. J. & KIRWAN G. M. 1997. — Eurasian collared-dove (*Streptopelia decaocto*), in DEL HOYO J., ELLIOTT A., SARGATAL J., CHRISTIE D. A. & DE JUANA E. (eds), *Handbook of the Birds of the World Alive, Volume 4*. Lynx, Barcelona.
- BELLOWS H. A. 1923. — *The Poetic Edda*. American-Scandinavian Foundation, New York, 634 p.
- BERGQUIST A. K. & TAYLOR T. F. 1986. — Thrace and Gundestrup reconsidered, in EVANS D. E., ELLIS D., GRIFFITH J. G. & JOPE E. M. (eds), *Proceedings of the Seventh International Congress of Celtic Studies 1983*. Ellis Evans, Oxford: 268-269.
- BOBER P. F. 1951. — Cernunnos: origin and transformation of a Celtic divinity. *American Journal of Archaeology* 55 (1): 13-51. <https://doi.org/10.2307/501179>
- BOEV Z. 2018. — Birds in everyday life and art in Bulgaria (Thracian and Roman periods). *Historia Naturalis Bulgarica* 27: 3-39.
- CRAMP S. 1985. — *Streptopelia decaocto* collared dove. *Handbook of the Birds of Europe, the Middle East and North Africa: the Birds of the Western Palearctic* 4. Oxford University Press, Oxford: 340-353.
- CRAWFORD J. M. 1910. — *The Kalevala: the Epic Poem of Finland*. Robert Blake, Cincinnati, 468 p.
- DA SILVA F. V. 2004. — The madonna and the cuckoo: an exploration in European symbolic conceptions. *Comparative Study of Society and History* 46 (2): 273-299. <https://doi.org/10.1017/S0010417504000143>
- FIELD J. 1993. — *English Field-Names: a Dictionary*. David and Charles, Newton Abbott, 360 p.
- FIELD J. E. 1913. — *The Myth of the Pent Cuckoo*. Elliot Stock, London, 320 p.
- FORSYTH K. 1997. — *Language in Pictland: the Case Against 'non-Indo-European Pictish'*. Nodus Publications, Munster, 48 p. (Coll. Studia Hameliana; 2).
- FOSSØY F., SORENSON M. D., LIANG W., EKREM T., MOKSNES A., MØLLER A. P., RUTILA J., RØSKAFT E., TAKASU F., YANG C. & STOKKE B. G. 2016. — Ancient origin and maternal inheritance of blue cuckoo eggs. *Nature Communications* 7 (10272). <https://doi.org/10.1038/ncomms10272>
- FRAZER J. G. 1922. — *The Golden Bough*. Macmillan, New York, 441 p.
- GHINOIU I. 1995. — Le calendrier populaire : mort et renaissance annuelle des divinités. *Ethnologie française* 25 (3): 462-472.
- GIMBUTAS M. 1989. — *The Language of the Goddess*. Thames and Hudson, London, 424 p.
- GRAÇA DA SILVA S. & TEHRANI J. J. 2016. — Comparative phylogenetic analyses uncover the ancient roots of Indo-European folktales. *Royal Society Open Science*. <https://doi.org/10.1098/rsos.150645>
- GRANT M. (trans.) 1960. — *The Myths of Hyginus*. University of Kansas Press, Lawrence, 244 p.
- GREEN M. 1986. — *The Gods of the Celts*. Sutton Publishing, Stroud, 244 p.
- GREEN M. 1992. — *Animals in Celtic Life and Myth*. Routledge, London, 304 p.
- GRIMM J. 1883. — *Teutonic Mythology Volume II*. George Bell, London, 681 p.
- GUBERNATIS A. DE 1872. — *Zoological Mythology or the Legends of Animals*. Trübner, London, 442 p.
- GUERBER H. A. 1895. — *Myths of the Northern Lands*. American Book Company, New York, 319 p.
- HANFFMAN G. M. A. 1957. — Narration in Greek art. *American Journal of Archaeology* 61 (1): 71-78.
- HARTE J. 1986. — *Cuckoo Pounds and Singing Barrows: the Folklore of Ancient Sites in Dorset*. Dorset Natural History and Archaeological Society, Dorchester, 102 p.
- HACHMANN R. 1990. — Gundestrup-Studien: Untersuchungen zu den spätkeltschen Grundlagen der frühgermanischen Kunst. *Bericht der Römisch-Germanischen Kommission Band 71* (2): 565-903.
- HATT J. J. 1965. — Essai sur l'évolution de la religion gauloise. *Revue des études anciennes* 67 (1-2): 80-125.
- HAYWOOD J. 2001. — *The Historical Atlas of the Celtic World*. Thames & Hudson, London, 144 p.
- HUY J. D' 2013. — A cosmic hunt in the Berber sky: a phylogenetic reconstruction of a Palaeolithic mythology. *Les Cahiers de l'AARS* 16: 93-106.
- HYGINUS: see GRANT 1960.
- INGERSOLL E. 1923. — *Birds in Legend, Fable and Folklore*. Longmans, New York, 312 p.
- JONES W. H. S. & ORMEROD H. A. (trans.) 1918. — *Pausanias. Description of Greece, Volume II*. Heinemann, London, 560 p.
- JOUTTIJÄRVI A. 2009. — The Gundestrup cauldron: metallurgy and manufacturing techniques. *Materials and Manufacturing Processes* 24 (9): 960-966. <https://doi.org/10.1080/10426910902988067>
- KAUL F. 2006. — Gundestrup Cauldron, in KOCH J. T. (ed.), *Celtic Culture: a Historical Encyclopedia, Vol. 2*. ABC-CLIO, Oxford: 854-857.
- KAUL F., MARAZOV I., BEST J. & DE VRIES N. 1991. — *Thracian Tales on the Gundestrup Cauldron*. Najade Press, Amsterdam, 114 p.
- KLINDT-JENSEN O. 1959. — The Gundestrup bowl: a reassessment. *Antiquity* 33 (131): 161-169. <https://doi.org/10.1017/S0003598X00027447>
- KLINDT-JENSEN O. 1960. — Le chaudron de Gundestrup, relations entre Gaule et l'Italie du Nord. *Analecta Romana Instituti Danici* 1: 45-66.
- KOSSACK G. 1954. — *Studien zum Symbolgut der Urnenfelder- und Hallstattzeit Mitteleuropas*. De Gruyter, Berlin, 166 p.
- KRAMER S. N. 1963. — *The Sumerians, their History, Culture, and Character*. University of Chicago Press, Chicago, 372 p.
- LAI C. M. 1988. — Messenger of spring and morality: cuckoo lore in Chinese sources. *Journal of the American Oriental Society* 118 (4): 530-542.
- LARSEN E. B. 1987. — SEM-Identification and documentation of tool marks and surface textures on the Gundestrup cauldron, in BLACK J. (ed.), *Recent Advances in the Conservation and Analysis of Artifacts*. Summer Schools Press, London: 393-408.
- LÓPEZ MONTEAGUDO G. 1977. — La diadema de San Martín de Oscos, in PERICOT GARCÍA L. & GARCÍA Y BELLIDO A. (eds), Homenaje a García y Bellido III. *Revista de la Universidad Complutense* (109): 99-108.
- MARCOVICH M. 1996. — From Ishtar to Aphrodite, in SULLIVAN E. E. JR. (ed.), Distinguished humanities lectures II. *Journal of Aesthetic Education* 30 (2): 43-59. <https://doi.org/10.2307/3333191>
- MÉCHIN C. 2001. — Du bon usage du coucou en hiver: sémiotique calendaire de *Cuculus canorus* L. *Anthropozoologica* 32: 23-31.
- NANCE D. A. 2019. — Gouk stones and other cuckoo place-names: prehistoric cult sites. *Scottish Geographical Journal* 135. <https://doi.org/10.1080/14702541.2019.1635265>
- NIELSEN S., ANDERSEN J. H., BAKER J., CHRISTENSEN C., GLASTRUP J., GROOTES P. M., HÜLS M., JOUTTIJÄRVI A., LARSEN E. B., MADSEN H. B., MÜLLER K., NADEAU K.-J., RÖHRS S., STEGE H., STOS Z. A. & WAIGHT T. E. 2005. — The Gundestrup cauldron: new scientific and technical investigations. *Acta Archaeologica* 76: 1-58. <https://doi.org/10.1111/j.1600-0390.2005.00034.x>

- O'BRIEN J. V. 1993. — *The Transformation of Hera: A Study of Ritual, Hero, and the Goddess in the Iliad*. Rowman & Littlefield, Lanham, 240 p. (Coll. Greek Studies: Interdisciplinary Approaches).
- OLMSTED G. S. 1979. — *The Gundestrup Cauldron: its Archaeological Context, the Style and Iconography of its Portrayed Motifs and their Narration of a Gaulish version of Táin Bó Cúailnge*. Peeters, Brussels, 306 p. (Coll. Latomus; 162).
- OLSON S. L. 1983. — Evidence for a polyphyletic origin of the Piciformes. *The Auk* 100 (1): 126-133.
- O'RAHILLY C. 1976. — *Táin Bó Cúailnge Recension 1*. Dublin Institute for Advanced Studies, Dublin, 312 p. <http://celt.ucc.ie/published/G301012/index.html>, last consultation: 04/09/2019.
- PAUSANIAS: see JONES 1918.
- PAYNE R., CHRISTIE D. A. & KIRWAN G. M. 2005. — Common cuckoo (*Cuculus canorus*), in DEL HOYO J., ELLIOTT A., SARGATAL J., CHRISTIE D. A. & DE JUANA E. (eds), *Handbook of the Birds of the World Alive, Volume 4*. Lynx, Barcelona.
- POWELL B. B. 1995. — *Classical Myth*. Prentice Hall, New Jersey, 707 p.
- POWELL T. G. E. 1971. — From Urartu to Gundestrup: the agency of Thracian metal-work, in BOARDMAN J., BROWN M. A. & POWELL T. G. E. (eds), *The European Community in Later Prehistory: Studies in Honor of C. F. C. Hawkes*. Routledge, London: 181-210.
- QUINTELA M. V. G. 2005. — Celtic Elements in Northwestern Spain in Pre-Roman times, in *The Celts in the Iberian Peninsula. e-Keltoi. Journal of Interdisciplinary Celtic Studies* 6: 497-569. [http://www4.uwm.edu/celtic/ekeltoi/volumes/vol6/6\\_10/garcia\\_quintela\\_6\\_10.pdf](http://www4.uwm.edu/celtic/ekeltoi/volumes/vol6/6_10/garcia_quintela_6_10.pdf), last consultation: 04/09/2019.
- RAWES B. G. 1977. — The field-name cuckoo pen in Gloucestershire. *Glevensis* (11): 35-38. <http://www.glosarch.org.uk/jnl11.pdf>, last consultation: 04/09/2019.
- REINACH S. 1922. — *Cultes, mythes et religions*. Leroux, Paris, 504 p.
- RICHARDS C. 1996. — Monuments as landscape: creating the centre of the world in late Neolithic Orkney. *World Archaeology* 28 (2): 190-208. <https://doi.org/10.1080/00438243.1996.9980340>
- ROSS A. 1967. — *Pagan Celtic Britain*. Constable, London, 433 p.
- ROSS R. M., GREENHILL S. J. & ATKINSON Q. D. 2013. — Population structure and cultural geography of a folktale in Europe. *Proceedings of the Royal Society B* 280 (1756). <https://doi.org/10.1098/rspb.2012.3065>
- ROWLETT R. M. 1993. — North Gaulish forms on the Gundestrup cauldron. *Proceedings of the Harvard Celtic Colloquium* 13: 166-182.
- RUSTOIU A. 2012. — The grave with a helmet from Ciumești – 50 years from its discovery. *Ephemeris Napocensis* 22: 159-183.
- RUSU M. 1971. — *Das Keltische Fürstengrab von Ciumești in Rumänien*. De Gruyter, Berlin, 15 p.
- RUTHERFORD J. 1953. — *Donaghadey: Presbyterian Churches and Parish*. McCaw, Stevenson & Orr, Belfast, 117 p.
- SIMEK R. & HALL A. 1993. — *Dictionary of Northern Mythology*. Brewer, Cambridge, 438 p.
- SPARAVIGNA A. 2008. — *The Pleiades: the Celestial Herd of Ancient Time-keepers*. <http://arxiv.org/abs/0810.1592>, last consultation: 04/09/2019.
- STERRY P., CLEAVE A., CLEMENTS A. & GOODFELLOW P. 1998. — *Field Guide to the Birds of Britain and Europe*. AA Publishing, Basingstoke, 416 p.
- STURLUSON S. & BRODEUR A. G. (trans.) 1916. — *The Prose Edda*. The American-Scandinavian Foundation, New York, 266 p.
- SWIRE O. F. 1966. — *The Outer Hebrides and their Legends*. Oliver & Boyd, Edinburgh, 250 p.
- TAYLOR T. 1992. — The Gundestrup cauldron. *Scientific American* 266 (3): 84-89.
- TILLHAGEN C. H. 1978. — *Fåglarna i folktron*. LTs förlag, Stockholm, 357 p.
- WOLKENSTEIN D. & KRAMER S. N. 1983. — *Inanna, Queen of Heaven and Earth: her Stories and Hymns from Sumer*. Harper & Row, New York, 227 p.

Submitted on 19 November 2018;  
 accepted on 9 July 2019;  
 published on 18 October 2019.