The Grass Snake and the Basilisk: From Pre-Christian Protective House God to the Antichrist

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ABSTRACT

The grass snake owes its far northern distribution in Europe to the production and hoarding of dung from stock breeding. Dung heaps appear to be perfect breeding sites that surpass ‘natural’ reproduction sites in quality. Here we point out that the grass snake’s dependency on manure goes back to Neolithic times and that it had a reciprocal cultural effect. Moreover, the positive influence of humans on the species not only resulted from physical opportunities offered by agriculture, but also from the fact that grass snakes were considered to be chthonic deities not to be harmed. The conversion of Europe to Christianity, however, marked the turning of the cultural tide for the species. From being a divine creature originally, the grass snake evolved into the number one symbol of the Anti-Christ: the basilisk. In spite of the subsequent witch-hunt motivated by Christian belief, the overall historical human influence on the species was certainly not detrimental as regarded geographical distribution opportunities. This historical perspective on grass snake–human relationships adds to the discussion of whether nature conservation is better served by a strategy of land sparing or of land sharing. It also makes clear not only that co-dependency of species is a matter of mutual biophysical advantages but that metaphysical
considerations may also play a role. In this case it leads to the conclusion that bringing back the grass snake into our direct everyday surroundings is both favourable to the grass snake and reinstates the species in our own cultural environment.

KEYWORDS

*Natrix natrix*, religion, folk tales, agriculture, nature conservation strategies

INTRODUCTION

The grass snake is the only oviparous reptile species capable of maintaining sustainable populations in the far north of Europe (up to 67° north latitude). The species owes this far northern distribution to its ability to make optimal use of exogenic energy sources for the hatching of its eggs. These exogenic energy sources can be of natural origin, such as rotting wood and plant debris washed ashore along rivers, brooks and lakes, but also from anthropogenic sources such as compost heaps. In particular, dung heaps appear to be perfect breeding sites for grass snakes and even surpass ‘natural’ reproduction sites in quality: well-rotted manure is an energy source for grass snake egg development that exceeds the capacity of more natural sources such as rotting wood.1 These man-made breeding sites are rapidly disappearing from our landscape due to large-scale industrialised agriculture, but also because of environmental legislation aiming at reduction of eutrophication. As a result, the grass snake is declining in large parts of its distribution area and has been placed on Red Data Lists in many European countries.2 Because of its preference for compost and dung heaps the grass snake is a species that, historically, greatly benefited from agriculture. Without this human aid the species would not have been distributed so widely. On the other hand, grass snakes living in close proximity to humans are likely to have had an impact on agricultural societies in return. Insight into the reciprocal relationship between grass snakes and human culture adds to the discussion of whether nature conservation is best served by a strategy of land sharing (combining human land-use with ecological functions) or of land sparing (setting land aside for nature alone). Therefore, we examined whether there is historical evidence throughout Europe for the crucial importance of dung heaps in the grass snake’s life cycle, and how far back in time this reliance on dung reaches. Moreover, we examined whether this hypothesised dependency of grass snakes on human culture has indeed had a reciprocal effect, and how this mutual relationship may have changed under the influence

of other cultural processes, especially Christianisation. For this, we conducted diachronic research, making use of historical sources covering a wide variety of disciplinary fields such as natural history, archaeology and the history of folklore, alchemy and religion. In order to allow interpretation of our findings we first provide a short overview of relevant knowledge of the grass snake’s ecological demands and behaviour. Subsequently, we elucidate the grass snake’s dependency on dung heaps from an historical perspective. The largest part of this article is dedicated to the cultural effects grass snakes have had on agricultural societies in the past, and how an originally positive perception of the grass snake changed under Christian influence. For practical reasons (data and information availability), we focus mainly on the Netherlands, Lithuania and Latvia. However, comparing and contrasting the Netherlands with the Baltic region also had a particular substantive reason. The Low Countries were Christianised relatively early in history compared to the Baltic regions (the eighth and thirteenth centuries, respectively). We therefore expected pre-Christian elements to survive in Baltic folklore for much longer than in Dutch folklore. Differences between the two regions may therefore indicate changing attitudes towards the grass snake under the influence of five centuries of Christianisation, although geographic differences may also have played a role. Finally, we draw conclusions as to the consequences insights into the grass snake’s historical position may have in determining nature conservation strategies for the species specifically, but also for nature conservation in general.

THE GRASS SNAKE

The grass snake, *Natrix natrix* (Linnaeus, 1758) is a relatively common and harmless natricine snake from the western palearctic, native to all European countries except Iceland and Ireland. The species has a distinctive yellow, orange or white collar, a feature which is expressed in several European names for the species (Table 1). When threatened, the grass snake shows several defence mechanisms: fleeing, aggressively hissing, secreting a stinking substance from the anal glands and even feigning death (*thanatosis* or *akinesis*) by turning its head upside down, sticking out its tongue sideways from the mouth (Figure 1) and, in exceptional cases, even squeezing out a droplet of blood from the mouth.3

Grass snakes are ectothermic and need frost-free hibernation sites in order to survive the cold winters in North and Western Europe. They prey mainly on amphibians, but are also known to eat fish, mammals, birds, other reptiles, invertebrates and conspecifics.4 The species has a semi-aquatic way of life, in which foraging mostly takes place in the aquatic part of its habitat and

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Figure 1. Grass snake feigning death. Note the head turned around, the tongue sticking out and the staring gaze. Photograph: I.A.W. Janssen.

Table 1. Names for the grass snake in several European languages, expressing the most distinctive feature of the species, viz. its yellow, orange or white neck collar.

<table>
<thead>
<tr>
<th>Language</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>Ringed snake (alternative name)</td>
</tr>
<tr>
<td>German</td>
<td>Ringelnatter</td>
</tr>
<tr>
<td>Dutch</td>
<td>Ringslang</td>
</tr>
<tr>
<td>Luxembourg</td>
<td>Réngelnatter</td>
</tr>
<tr>
<td>French</td>
<td>Couleuvre à collier</td>
</tr>
<tr>
<td>Italian</td>
<td>Biscia dal collare</td>
</tr>
<tr>
<td></td>
<td>Natrice dal collare</td>
</tr>
<tr>
<td>Spanish (Castilian)</td>
<td>Culebra de collar</td>
</tr>
<tr>
<td>Catalan</td>
<td>Serp de collaret</td>
</tr>
<tr>
<td>Portuguese</td>
<td>Cobra-de-água-de-colar</td>
</tr>
<tr>
<td>Basque</td>
<td>Suge gorbataduna</td>
</tr>
</tbody>
</table>

hibernation, resting and reproduction on land. Grass snakes can cover large distances (more than five kilometres) between terrestrial and aquatic habitat. The oviparous females lay, according to their length, up to forty eggs of

around two to three centimetres in the period June–August. Egg deposition sites are characterised by high temperatures and high atmospheric humidity, both resulting from putrefaction of organic material. Depending on incubation temperature, the young hatch after four to eight weeks. Differently from most other reptiles, grass snakes do not avoid human settlements. Indeed, humans and grass snakes often share the same habitats: elevated dry environments combined with the availability of fresh water. Therefore, grass snakes can often be found in (sub)urban landscapes. There they successfully make use of landscape elements of human origin for hibernation (dikes, embankments and old buildings) and for reproduction (dung and compost heaps). Especially for egg deposition they are dependent on anthropogenic sites; documentation on ‘truly natural’ deposition sites is scarce and anecdotal. Creating artificial egg deposition sites in the form of compost heaps is considered to be one of the most successful conservation measures to be taken for grass snakes.

HISTORICAL DEPENDENCY ON DUNG

Natural history sources

Historical knowledge on the importance of dung and dung heaps for grass snake reproduction in Europe becomes readily apparent from many natural history books of the last four centuries. Throughout Europe, a clear preference for dung heaps as egg deposition sites is reported. References to this are found not only for northern countries, where the need for extra energy for egg development is obvious, but also for Western- and Central-European countries and Southern Europe. Reports of grass snakes depositing eggs in stables and barns probably also refer to the use of dung as egg deposition sites – for example in sheep folds and even in duck houses and hen coops. By the beginning of the nineteenth century it was recognised that the grass snake’s preference for putrefying organic matter as egg deposition sites may, at least in some parts of Europe, result from the fact that solar heat alone is insufficient for the hatching

9. See a.o. Gesner 1599, xlvii-xlviii; Topsell 1608, 245; Chomel 1778, 3053; Fiedler 1790, 133; Goeze 1797, 190; Bechstein 1801, 304; Sonnini 1801/1802, 42; Anonymous 1817, 261–2; Behlen 1826, 598; Cuvier 1844, 363; Froriep 1858, 221; Winkler 1868, 359; Brehm 1896/99, 68.
10. Norway: Anonymous 1797; Scandinavia in general: Nilsson 1842, 44; England: Topsell 1608, 245; Anonymous 1824, 132–3; and Cooke 1865, 47; Switzerland: Gesner 1599, xl-vii-xlviii, and Lutz 1859, 312; The Netherlands: Van Lier 1781, 64–9; and Bennet and Olivier 1822, 417; Spain: Dubroca 1803, 287–8; Italy: De Betta 1857, 217.
11. Winkler 1868, 359; Brehm 1896/99, 68; Van Lier 1781, 64–9; Van der Zweerde 1977, 117.
of eggs. In addition, grass snakes used dung and stables not only for egg deposition, but also for hibernating and taking shelter.

Since unambiguous identification of grass snakes in older ‘natural history books’, such as bestiaries, is somewhat problematic, Gesner’s (1599) and Topsell’s (1608) works can be considered to be the oldest written scientific evidence for egg deposition in dung by grass snakes.

**Latvian and Lithuanian folk tales**

Another historical source, although indirect, for the relation between dung heaps and grass snake egg deposition is folk tales. Especially for Latvia and Lithuania, folk tales with references to (grass) snakes are abundant and extensively documented. Most of these stories date back at least to the nineteenth century, but most have their historical roots much further back in time. Grass snake eggs are mentioned in 41 Baltic folk tales gathered by Luven (Figure 2). Of these, twelve relate directly to ‘eggs found in dung’ and an additional four to ‘eggs found in barns or stables’, most probably also referring to dung. The remaining reports of grass snake eggs relate to ‘the housing part of the farm’ (ten, of which three relate to their discovery in shoes and three to depositions near the farm’s oven, apparently another good source of exogenic energy). Some were reported elsewhere on the farm (two) or on sites not clearly specified (thirteen). From these folk tales it thus becomes apparent that dung and dung heaps were important egg deposition sites for grass snakes. Written or oral historical evidence for the relationship between grass snake egg deposition sites and dung in folk tales from other countries could not be found. However, there are other sources that reach back even further in time, namely archaeological excavations.

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13. Gesner 1599, xlvii-xlviii; Wulff 1765, 11–12; Chomel 1778, 3053; Fiedler 1790, 133; Fischer 1791, 240; Dubroca 1803, 287–8; Anonymous 1817, 261–2; Behlen 1826, 598; Schilling 1837, 416–8; Glückselig 1851; Lutz 1859, 312; Van Bemmelen 1866, 97–8; Schlegel 1862, 15.


15. Luven 2001, 325–460. Although references to grass snake eggs in historical Dutch newspapers are numerous, none could be retraced in folk tales from The Netherlands.
Archaeological sources

We completed a survey of zoo-archaeological findings of grass snake remains in the Netherlands by an additional literature search in archaeological reports and by consulting BoneInfo, the online zoo-archaeological database of the Dutch Cultural Heritage Agency (RCE). In total twenty sites with grass snake remains are recorded for the Netherlands (Table 2). For comparison, only one site (possibly two) contained the remains of adder (Vipera berus) and none contained remains of the smooth snake (Coronella austriaca), the only other two known snake species in the Netherlands. In this context, it should be mentioned that, of these three snake species, only the grass snake is oviparous; the other two species are ovoviviparous. The chance of finding zoo-archaeological remains of oviparous species is higher since eggs or egg remnants can also be retrieved from archaeological digs. Table 2, however, shows that in at least ten archaeological sites grass snake bone remains were found in the form of ribs, vertebrae and cranial elements. Since archaeological excavations by definition

18. Gehasse 2001; Zeiler and Brinkhuizen 2012; BoneInfo.
### Table 2. Zoo-archaeological remains of grass snakes in the Netherlands.

<table>
<thead>
<tr>
<th>Location</th>
<th>Lat./Long.</th>
<th>Era</th>
<th>Dating</th>
<th>Type</th>
<th>No.</th>
<th>Context</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hardinxveld-Giessendam</td>
<td>51°49'57&quot;N 4°48'36&quot;E</td>
<td>Upper Mesolithic</td>
<td>5100–4800 calbc</td>
<td>eggs</td>
<td>1</td>
<td>marshy layer coarse sand</td>
<td>1, 2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>vertebrae</td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hardinxveld-Giessendam</td>
<td>51°49'57&quot;N 4°48'36&quot;E</td>
<td>Upper Mesolithic</td>
<td>5500–5100 calbc</td>
<td>eggs</td>
<td>1</td>
<td>marshy layer coarse sand</td>
<td>1, 2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>vertebrae</td>
<td>70</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hardinxveld-Giessendam</td>
<td>51°50'12&quot;N 4°49'23&quot;E</td>
<td>Upper Mesolithic</td>
<td>5500–5100 calbc</td>
<td>eggs</td>
<td>3</td>
<td>colluvium coarse sand/peat</td>
<td>1, 2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>vertebrae</td>
<td>60</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hardinxveld-Giessendam</td>
<td>51°49'57&quot;N 4°48'36&quot;E</td>
<td>Early Neolithic</td>
<td>4700–4450 calbc</td>
<td>vertebrae</td>
<td>47</td>
<td>coarse sand</td>
<td>1, 2</td>
</tr>
<tr>
<td>Rijswijk</td>
<td>52°2'29&quot;N 4°21'59&quot;E</td>
<td>Middle Neolithic</td>
<td>3900–3200 BC</td>
<td>unknown</td>
<td>unknown</td>
<td>unknown</td>
<td>3</td>
</tr>
<tr>
<td>Keinsmerbrug</td>
<td>52°48'55&quot;N 4°47'18&quot;E</td>
<td>Late Neolithic</td>
<td>2850–2000 BC</td>
<td>unknown</td>
<td>2</td>
<td>unknown</td>
<td>3, 4</td>
</tr>
<tr>
<td>Schagen</td>
<td>52°47'31&quot;N 4°48'24&quot;E</td>
<td>Early Bronze Age</td>
<td>2000–1800 BC</td>
<td>vertebrae/</td>
<td>96/2</td>
<td>partly dung</td>
<td>3, 5</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>cranial</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>elements</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bovenkarspel</td>
<td>52°43'77&quot;N 5°14'25&quot;E</td>
<td>Middle Bronze Age – Late Bronze Age</td>
<td>1800–800 BC</td>
<td>ribs/vertebrae</td>
<td>18/44</td>
<td>house ditch</td>
<td>1, 6</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Westwoud</td>
<td>52°40'37&quot;N 5°7'17&quot;E</td>
<td>Middle Bronze Age – Late Bronze Age</td>
<td>1200–790 calbc</td>
<td>unknown</td>
<td>3</td>
<td>unknown</td>
<td>7</td>
</tr>
<tr>
<td>Vlaardingen</td>
<td>51°56'41&quot;N 4°20'25&quot;E</td>
<td>Late Iron Age</td>
<td>200–100 BC</td>
<td>eggs</td>
<td>1</td>
<td>peaty house floor</td>
<td></td>
</tr>
<tr>
<td>Rotterdam</td>
<td>51°57'18&quot;N 4°30'52&quot;E</td>
<td>Late Iron Age</td>
<td>200–100 BC</td>
<td>eggs</td>
<td>12</td>
<td>peat with dung</td>
<td>1</td>
</tr>
<tr>
<td>Maasland</td>
<td>51°55'33&quot;N 4°16'4&quot;E</td>
<td>Late Iron Age?</td>
<td>40–50</td>
<td>eggs</td>
<td></td>
<td>organic material/peat</td>
<td>1</td>
</tr>
<tr>
<td>Santpoort</td>
<td>52°25'56&quot;N 4°37'22&quot;E</td>
<td>Late Iron Age – Roman Period</td>
<td>100 BC – AD 150</td>
<td>vertebrae</td>
<td>many</td>
<td>unknown</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vlaardingen</td>
<td>51°55'2&quot;N 4°17'50&quot;E</td>
<td>Roman Period</td>
<td>0–AD 100</td>
<td>eggs</td>
<td>1</td>
<td>dung layer in house</td>
<td>1</td>
</tr>
<tr>
<td>Schiedam</td>
<td>51°56'10&quot;N 4°23'55&quot;E</td>
<td>Roman Period</td>
<td>0–AD 100</td>
<td>eggs</td>
<td>18</td>
<td>dung layer in ditch</td>
<td>1</td>
</tr>
<tr>
<td>Schagen</td>
<td>52°46'29&quot;N 4°47'41&quot;E</td>
<td>Roman Period</td>
<td>0–AD 300</td>
<td>vertebrae</td>
<td>51</td>
<td>pit</td>
<td>1</td>
</tr>
<tr>
<td>Den Haag</td>
<td>52°3'23&quot;N 4°12'36&quot;E</td>
<td>Roman Period</td>
<td>AD 150–250</td>
<td>vertebrae</td>
<td>1</td>
<td>unknown</td>
<td>9</td>
</tr>
<tr>
<td>Schagen</td>
<td>52°46'32&quot;N 4°48'34&quot;E</td>
<td>Roman Period</td>
<td>AD 200–300</td>
<td>ribs/vertebrae</td>
<td>16/78</td>
<td>pit with peaty filling</td>
<td>1, 3</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vlaardingen</td>
<td>51°55'2&quot;N 4°17'50&quot;E</td>
<td>Late Iron Age – Middle Ages</td>
<td>AD 1100–1150</td>
<td>eggs</td>
<td>75</td>
<td>unknown</td>
<td>1</td>
</tr>
<tr>
<td>Gouda</td>
<td>52°0'36&quot;N 4°40'25&quot;E</td>
<td>Middle Ages</td>
<td></td>
<td>eggs</td>
<td>1</td>
<td>dung</td>
<td>1, 3</td>
</tr>
</tbody>
</table>

take place in cultural environments, and since there are no taphonomic reasons why grass snake remains would be preserved better than those of adder and smooth snake, the conclusion is justified that in (pre-)historical times, as today, grass snakes co-inhabited human settlements more often than other snake species. Table 2 also shows that about half of the grass snake findings relate to eggs or egg remnants. This is also the case for three sites dated as being Upper-Mesolithic (originating from 5500–5300 BC, 5500–5100 BC and 5100–4800 BC, respectively).\(^\text{19}\) During these periods, agriculture is believed not yet to have been in existence in the Netherlands.\(^\text{20}\) This does not, therefore, concur with the hypothesis that egg deposition is related to the hoarding of dung. However, the number of eggs in these sites is very low and could be incidental or related to other types of domestic refuse, like, for instance, human latrines. More important, however, is the fact that the dating of these sites overlaps to a certain degree with the Early-Neolithic, for the Netherlands defined as the period 5300–4200 BC. Furthermore, not only remains of wild animals were found in these sites but also remains attributed to domestic animals like sheep, goats, pigs and cattle, especially in the youngest Upper-Mesolithic site mentioned.\(^\text{21}\) Stock-breeding appears already to have been practised on this site, at least to some degree, in Upper-Mesolithic times. Therefore, grass snake remains could have been related to agricultural activities in these so-called Upper-Mesolithic sites after all.

At the sites of Vlaardingen, Rotterdam, Schiedam, Maasland and Gouda (Late Iron Age, 200–100 BC, and later) grass snake eggs were found in a context that could certainly be designated as agricultural, mostly in dung layers in or near farms where dung was used to consolidate farm floors. In almost every single Late Iron Age farm excavated in the Middle-Delfland area in the Netherlands one or more grass snake egg remains were found in the farm floors.\(^\text{22}\) In general, it may be concluded from the zoo-archaeological evidence that, in the Netherlands, grass snakes, and particularly egg deposition by grass snakes, are related to human (agricultural) activities and especially to dung production and hoarding, from the Upper-Mesolithic onwards.

**PRE-CHRISTIAN SIGNIFICANCE**

From the previous sections it is apparent that grass snakes benefited from agriculture from prehistoric times onwards. Subsequently, the question arises as to whether the presence of grass snakes in the direct vicinity of human

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22. Oral communication by the archaeologist Koot in Wijngaarden-Bakker and Troostheide (2003); not further documented.
settlements in turn had effects on human culture. In so-called primitive societies, natural phenomena played an important role in understanding the world’s cosmological order. In the perceptions of our forebears, this order was highly connected to everyday subsistence. Although it is known that humans have an innate fear of snakes in general and a negative overtone towards snakes exists, there are also strong indications that in the past snakes played a positive role in interpreting the cosmological order. Taking snake biology into account, this positive role can be explained as follows. Snakes re-appeared from their underground hibernation sites in early spring, even when snow was still covering the ground. Therefore, they were regarded as heralds of spring. Sloughing symbolised renewal; snakes that were ‘blind’ could see again after shedding the old skin that still covered their eyes. The fact that snakes do not have eyelids, and therefore do not blink their eyes, made them to our forebears all-seeing creatures and therefore very wise. To stock-breeding societies, grass snakes in particular may have been important in this context; they were not poisonous and thus did not harm the cattle in whose direct vicinity they were frequently observed due to their preference for dung. Cattle – among the most valuable possessions of early agricultural societies, especially because dung was used for fertilising fields – were thus even believed to be protected by grass snakes: more grass snakes correlated with more dung which correlated in turn with more cattle. In this way grass snakes were also regarded as fertility symbols, connected with plentiful agricultural production, and as givers and guardians of treasure and wealth.

On the other hand, grass snakes were also linked with death, connecting the transitional world of the here and now to the underworld. They were associated with funerary rites, their key symbolism being cosmological mediation and movement, and representing both death and revivication. In pre-Christian Baltic religion, grass snakes represented a family’s forebears after their passing away. Reincarnated as grass snakes, the dead ancestors still participated in domestic life, taking care of their descendants by protecting valuable cattle and by stimulating fertility. Grass snakes were therefore welcomed in people’s houses. This ‘house serpent’ was considered to be the good spirit of

26. Lewis-Williams and Pierce 2005, 189–92; remains of grass snakes were found in the residue of a Neolithic concoction together with remains of some other animals. The concoction is believed to have been used in a funeral rite.
28. Typical in this context is a story about a farmer in Walachia (Romania) who killed a snake presumably threatening his son. The justification he gave for killing the snake was that it ‘did not belong to our family’ (‘gehörte nicht zu unsere Familie’) – Anonymous 1869.
29. Cf. the Swedish word for grass snake: husorm (=house snake).
the place, and a link to generations of forebears who farmed the native soil.\textsuperscript{30} Thus a genuine house serpent cult came into being in large parts of Europe.\textsuperscript{31} In classical Greece and in the Roman Empire too snakes in general played an important role in religion, especially with regard to healing and fertility but also connected with the spirits of the dead.\textsuperscript{32} In classical Roman religion, the \textit{genius loci} or protective spirit of the place was symbolised by a snake which was held and fed with milk in the temple of the (originally Slavonic) god Potrimpos, considered to be the god of spring, happiness, fertility, harvest and wealth. In the former Prussia, Potrimpos was known as Natrimpe, and the protective snake symbol was known as \textit{žaltys/zalktis}, the Latvian/Lithuanian word for grass snake.\textsuperscript{33} Some authors even consider house-serpent worship as common Indo-European property.\textsuperscript{34} This strengthens the idea that pre-Christian societies were characterised by a religion in which chthonic gods and – especially – goddesses, connected with earth fertility were central.\textsuperscript{35} The serpent, and especially the grass snake, was believed to be one such deity or a representative thereof. As a semi-aquatic organism, the grass snake was also connected with wells and springs, life-bringing gifts from the chthonic fertility gods, especially Natrimpe.\textsuperscript{34}

Another metaphysical serpent symbol is the ouroboros, the snake devouring its own tail, symbolising the cyclical and the eternal but also coition and thus the source of life. This symbol is acknowledged far beyond the borders of Europe and far back in time, and may be found in cultures such as that of ancient Egypt.\textsuperscript{36} A recently discovered mating ritual of the grass snake – several males moving in circles trying to gain favour with a nearby female\textsuperscript{37} – may in part be the origin of this connection with cyclicity.

The grass snake’s ‘golden’ neck ring (the species’ most distinctive characteristic, see Table 1) was yet another feature that gave rise to supernatural beliefs. Although this is somewhat speculative, the ring may have served as a model for the often-golden torques that were so popular in Celtic and other Iron Age cultures. In fact, many of these torques are ornamented with snake motifs and are considered as ouroboros symbols as well.\textsuperscript{38} There is also a parallel between the grass snake and Celtic warriors fighting naked wearing nothing but a golden torque, as mentioned in Polybius’ \textit{Histories} regarding the Celtic
tribe of the Gaesatae, and represented by the famous sculpture of the dying Gaul in the Capitoline Museums in Rome. Were these warriors mimicking grass snakes that had shed their old skin, in the hope that this would renew their strength and/or bless them with their forebears’ approval? Finally, the famous Gundestrup cauldron is interesting in this respect. On this cauldron the Celtic fertility god Cernunnos was portrayed, ornamented with a torque around his neck, another torque in his right hand and a serpent, given its length and distinctive neck ring most probably a grass snake, in his left hand. Obviously, in large parts of Europe snakes in general and the grass snake in particular were important religious fertility symbols. Grass snakes must thus have benefited from human facilitation not only indirectly, through the creation of dung heaps, but also from more active protection afforded because of their divine status in pre-Christian times; it was thought to be in farmers’ interests to protect grass snakes. From this perspective the question arises of how the authorities of the Roman Catholic church responded to the divine status and worship of the grass snake during the Christianisation of Europe from the Early Middle Ages onwards.

CHRISTIAN RESPONSE TO SERPENT CULT

The Christian cultural context

With the conversion of Europe to Christianity, symbols from other religious beliefs had to be eradicated or – at best – were subject to an *interpretatio Christiana*: that is, they were transformed into symbols with Christian meaning, sometimes from deities to demons.\(^{39}\) From the viewpoint of the Roman Catholic Church, the pagan forebears of new converts were doomed forever. Only those who had adopted the new faith were eventually to be saved on Judgement Day. The church’s index on heathen customs to be abjured, the *indiculus superstitionum et paganiarum*, forbade considering deceased forebears to be sacred. Jesus was the alpha and the omega, the beginning and the end. The conception of time from a Christian perspective thus became essentially linear. This was in contrast with pagan belief hitherto, in which ancestors were of crucial significance and time was basically cyclical. Since the divine grass snake symbolised both deceased ancestors and cyclicity, this species suffered particularly from the ecclesiastical conversion rage of the Roman Catholic Church.

Condemnation of the grass snake in early Christian literature, however, is not always easy to trace. Early medieval works referring to animals are often difficult to interpret because of species identification problems,\(^{40}\) but also

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because of multiple layers of meaning in understanding medieval works. The *Liber simplicis medicinae* or *Physica* (1151–1158) by the abbess Hildegard von Bingen is such a work.\(^{41}\) In the *Physica*, Von Bingen described — along with some mythical species — animals that actually lived in the vicinity of her hometown Bingen or by the River Danube along which she made several journeys. Under the lemma *quoaddam genus serpentis* (‘a certain serpent’) Von Bingen described a snake species that is able to live on land and water. For a number of reasons, we believe this to be the grass snake, which, as we have seen, inhabited both terrestrial and aquatic habitats. Under the same lemma she described *aliud autem genus serpentis* (‘another kind of serpent’). This species only lived on land, but it must have been the same or a very similar species (otherwise it would not have been described under the same lemma). This may refer to the Aesculapian snake (*Zamenis longissimus*) of which an isolated and remnant population still lives in the vicinity of Bingen today, near the German town of Schlangenbad.\(^{42}\) The young and sub-adults of this species also have a yellow neck ring and therefore resemble the grass snake. Moreover, this species also deposits its eggs in dung, which makes it understandable that both species were treated under the same lemma. Since no other snake species that could have occurred in the vicinity of Bingen\(^{43}\) are described, and given the fact that the grass snake must have been a relatively common species in this region, we conclude that, under the lemma *quoaddam genus serpentis*, it was the grass snake, and possibly also the Aesculapian snake, that was being described. The fact that this serpent was not given a precise name also points to the grass snake, since naming the species was known to be taboo in pre-Christian times because of its pagan status.\(^{44}\) Von Bingen also mentioned that this ‘certain serpent’ sometimes lived with people in their homes, and that ‘when it sees that a person wants to strike it, it sticks out its tongue and moves it in supplication’.\(^{45}\) This last description perfectly resembles a grass snake performing thanatosis (Figure 1). In contrast to its divine pre-Christian status, however, this snake now has ‘diabolic arts for ambushing people’ and ‘is hostile towards human beings’. Furthermore, ‘it sends out its breath, which is full of deadly poison’ (but note that Von Bingen did not assert that the serpent’s bite was deadly). To

\(^{41}\) Edited and translated by Throop 1998.

\(^{42}\) Musilová et al. 2010.

\(^{43}\) In fact there is a second natricine snake species that lived near Bingen in the past, the dice snake (*Natrix tessellata*). This species also deposits its eggs in dung, although this happens only rarely. Relatively recently the dice snake became locally extinct in the area. Riethe (1996, 196–7 and 228–9) believes that *quoaddam genus serpentis* referred to the dice snake and *aliud autem genus serpentis* to the grass snake. In contrast to the grass snake and the Aesculapian snake, however, the dice snake has a nearly full aquatic lifestyle and lacks the yellow neck ring in all life stages; thus it cannot be confused with the former species.

\(^{44}\) Luven 2001, 18. See also Schmidt-Goebel (1865) for Hungary.

\(^{45}\) Translations by Throop 1998, 231.
top it all, ‘it is of the kind that seduced Adam’. Thus, probably the single most important symbol of pre-Christian chthonic fertility gods, the grass snake, was turned into the number one enemy of the one and only heavenly God. The sixteenth century Swedish bishop Olaus Magnus, in his *Historia de Gentibus Septentrionalibus*, mentioned the repudiation of the divine grass snake by the Catholic Church in even more plain terms, stating that, since the adoption of Christianity, practices of house-serpent (grass snake) worship in Scandinavia were completely forbidden.

In his *Der Naturen Bloeme* (c. 1270) the Dutch-Flemish chaplain and writer Jacob van Maerlant (c. 1225–1300) described yet another transformed feature of the grass snake. The grass snake, originally connected with life-bringing springs, was turned into a serpent that poisoned brooks, wells and fountains. In *Der Naturen Bloeme* these were the only sentences that concerned the grass snake (*Natrix*) as such. In Konrad von Megenberg’s (1309–1374) *Buch der Natur* (1349/1350) we find a similar reference to the *Natrix*. Von Megenberg added to this the allegory that the *Natrix* was to be understood as the cheat that poisoned the waters of wisdom and everlasting truth by mingling them with false doctrine, a clear case of *interpretatio christiana* and an almost perfect definition of the Antichrist, often embodied as another ‘serpent’: the basilisk.

The birth of the basilisk

It is striking how few lines in bestiaries and other medieval and early modern ‘animal encyclopedias’ are devoted to the grass snake. In *Der Naturen Bloeme* and *Das Buch der Natur* for instance, a mere thirty and 68 words are written about the *Natrix* respectively. In over forty English/Latin bestiaries no species are listed that can be identified unambiguously as grass snakes. In our opinion, the grass snake is relatively easily distinguishable from other North-European ‘serpents’ like the adder, smooth snake and slow worm due to its yellow neck ring. Furthermore, at the time grass snakes lived in the direct

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46. The beguilement of Adam and Eve by the grass snake was still discussed by modern authors like Shaw (1757, 194) and Van Lier (1781, 79–82).
48. ‘Natrix, dat es I serpent, alse Lucaen ende Ysodorus kent, dat met venine maket onreine putte, beken ende fonteine. Dart in luschet ende leghet des anders ghen serpent ne pleghet.’ In Van der Vooort 2001, 120. (‘Natrix is a serpent, as Lucan and Isidore knew it, that infects wells, brooks and fountains with its poison. There it hides and lies as no other serpent tends to do.’ English translation by the authors).
49. ‘Pei der slangen verstên ich die velscher die daz wazzer der weishait und der êwigen wârhait vergiftent mit der valscher lêr die si dar ein mischent.’ In Pfeiffer 1861, 274–5. (‘This snake I understand to be the cheat that poisons the water of wisdom and everlasting truth with the false faith that she mingles with it.’ English translation by the authors).
50. Studied by George and Yapp 1991.
51. See also Table 1; the ubiquitously used name for the species referring to its neck ring makes it clear that this was and is a very distinctive characteristic of the grass snake.
vicinity of human settlements and must therefore have been noticed frequently. It may be the case that the pre-Christian taboo on naming the species was still partly in force and that, therefore, the species is hardly ever mentioned under a clearly recognisable name. It is, however, inconceivable that a species that was so common in Europe and that had played such an important role in pre-Christian, and indirectly also in Christian, religion should be overlooked and so little written about.

Regarding the mythical basilisk, *Der Naturen Bloeme* and *Das Buch der Natur* contain 313 and 451 words respectively. Moreover, this ‘species’ is mentioned in almost every existing English/Latin bestiary. Scrutinizing medieval and post-medieval texts reveals the probability that references to the basilisk may in fact be about, or at least (largely) based on, the grass snake and its Christian repudiation. Recent claims that the basilisk should be identified as the Egyptian cobra (*Naja haje*) or the king cobra (*Ophiophagus hannah*) cannot hold for several reasons. Pliny, one of the first authors to mention the basilisk in his *Naturalis Historia*, described it as a snake no more than a foot long with a bright white spot on its head like a diadem, which does not correspond with either cobra’s size and markings. When hatched, the young of the king cobra, for example, already measure 45 to 50 cm, almost twice as long as Pliny’s basilisk. If Pliny’s basilisk had been a cobra, Pliny himself would have most certainly have described the conspicuous hood of the animal, even if he had known the creature only from travelers’ tales and curios. The region Pliny described as the home country of the basilisk (Cyrenaica, present-day Libya in North Africa) does correspond with the range of distribution of the Egyptian cobra, but not with that of the king cobra (South-east Asia). In the end, some of the characteristics of the (post-)medieval basilisk may have been derived from other serpent species and ‘basilisk features’ in turn are undeniably transferred to other species. But the most probable ‘forebear’ of the basilisk is the grass snake, as we will elucidate below.

In Table 3, the history of the basilisk is summarised from a selection of written (post-)medieval texts, starting with Von Bingen’s account of the creature. Via twelfth and thirteenth century bestiaries, in which the basilisk is mentioned as the ‘king of snakes’, we reach Van Maerlant and Von Megenberg who both describe the basilisk as a serpent that has spots *as if* it has a crown and call it *coninc* and *künich*, old Dutch and German words for ‘king’ respectively. In his *Der Dieren Palleys* (1520) the Flemish publisher Van Doesborg also referred to the basilisk as *coninc*, but now the basilisk actually wore a crown. All these writers thus considered the basilisk to be the king of all serpents, which may

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52. George and Yapp 1991.
56. See e.g. Sax 1994, regarding the rattlesnake.
Table 3. Chronological development of characteristics attributed to the basilisk in bestiaries and other (post-)medieval animal encyclopaedias.

<table>
<thead>
<tr>
<th>Year</th>
<th>Original language</th>
<th>Edition</th>
<th>Edition year</th>
<th>Name</th>
<th>Regulus</th>
<th>picture</th>
<th>x</th>
<th>x</th>
<th>x</th>
<th>?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1151/1158</td>
<td>Latin</td>
<td>Throop</td>
<td>1998</td>
<td>basiliscus</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>?</td>
</tr>
<tr>
<td>12th century</td>
<td>Latin</td>
<td>White</td>
<td>1954</td>
<td>basiliscus</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>?</td>
</tr>
<tr>
<td>c. 1200</td>
<td>Latin</td>
<td>Aberdeen</td>
<td>2011</td>
<td>basiliscus</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>?</td>
</tr>
<tr>
<td>c. 1270</td>
<td>Latin</td>
<td>Anonymous</td>
<td>2001</td>
<td>basilius</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>?</td>
</tr>
<tr>
<td>1349/1350</td>
<td>Dutch</td>
<td>Van der Voort</td>
<td>1861/1971</td>
<td>basiliscus</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>?</td>
</tr>
<tr>
<td>1520</td>
<td>German</td>
<td>Pfeiffer</td>
<td></td>
<td>basiliscus/unk</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>?</td>
</tr>
<tr>
<td>1599</td>
<td>Dutch</td>
<td>Van Doesborg</td>
<td></td>
<td>basiliscus</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>?</td>
</tr>
<tr>
<td>1608</td>
<td>Latin/English</td>
<td>Gesner</td>
<td></td>
<td>basiliskos/</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Topsell</td>
<td></td>
<td>regulus</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>?</td>
</tr>
</tbody>
</table>

Name: basiliscus - basiliscus

Poisonous:
- breath: x
- vision: x
- smell: x
- Deathly hissing: x
- Bite (deadly bite): x

Poisons:
- the air: x
- the water: x
- the land: x

Relation with houses:
- x

Eggs:
- laid by cock: x
- laid by snake: x
- bred by cock: x
- bred by toad: x
- bred by snake: x
- in dung: x
- without shell: x
be a reference to the former high-ranked status of the grass snake as a chthonic deity. Salient detail in Das Buch der Natur is that Von Megenberg referred to the Latin Basiliscus with the German word Unk. The same word Unk was used for the grass snake.\textsuperscript{57} The basilisk was also connected with dung, from which it was believed to originate (Van Maerlant and Van Doesborg), another clear natricine characteristic. Also the myth that the basilisk originated from eggs laid by a cock (and hatched by a toad, a snake or the cock itself) can be seen is this light. As late as the nineteenth century several authors drew attention that the tale that the cock laid eggs in dung heaps from which snakes hatched, and this in fact related to grass snakes.\textsuperscript{58} The dung heap was, after all, also frequented by the cock in old agricultural settlements, as often depicted in drawings and paintings. In a few cases, there was also a connection between the basilisk and the home, in an unexpected, protective way: homes where basilisks had kept residence were thought never to be inhabited by other more dangerous snakes.

In all the medieval works mentioned in Table 3, the basilisk is regarded as poisonous, but remarkably not because of its bite and instead because of its gaze, smell, breath or hissing, all of which were typical features of the grass snake (especially the smell). If the bite of the basilisk was mentioned, it was not considered venomous until references to its alleged poisonousness first appeared in the post-medieval works of Gesner and Topsell. In many works the basilisk was also considered poisonous to water, air and especially to land; it seems that the grass snake as a pre-Christian fertility symbol was transformed into a destroyer of the soil’s bounty. Or, as Von Bingen stated in her Physica: ‘If a basilisk has died in any field or vineyard, and its cadaver has rotted there, that place will be unfruitful and sterile’.\textsuperscript{59} Other examples also underline this symbolic transformation: formerly, house-snakes represented deceased ancestors, they were believed to be protectors of cattle and farm residents and they almost always came in pairs to guard the father and the mother of the household. If one of the grass snakes was harmed or killed, it was believed that the man or woman it represented would soon die or their cattle would languish. In Christian belief, this principle was simply turned around. Misfortune was not the result of the killing of the protector, but – on the contrary – it was thought to be the basilisk’s fault. Again, we cite Von Bingen: ‘If it dies and rots in any … house, the people there will always be ill, and the animals in that place will frequently get disease and very often die from it’.\textsuperscript{60}

The basilisk also found its way into the obscure realm of alchemy. Von Megenberg wrote about a scholar he knew who was able to breed an ‘unk’ (basilisk) from mere egg yolk. This ‘unk’ was subsequently killed by spiders and rue (a shrubby herb used medicinally) and pulverised by the alchemist to

\textsuperscript{57} See a.o. Goeze 1797, 183; Luven 2001, 66.
\textsuperscript{58} Cuvier 1844, 363; De Betta 1857, 217.
\textsuperscript{59} Translation by Throop 1998, 234.
\textsuperscript{60} Translation by Throop 1998, 234.
obtain the substance he was after. An early-eighteenth alchemist wrote that ‘The cocks lay eggs, from which a snake is born, that is called a basilisk and that can kill by its look, if one places them [the eggs] in dung’. This basilisk could subsequently be used to produce a white philosopher’s stone, one of the two key types of philosopher’s stones.\textsuperscript{61}

In several medieval and post-medieval works, even in bestiaries that had a separate lemma for the basilisk itself, the creature also appeared under a number of other names, especially\textit{regulus} and \textit{cockatrice}. In most cases these ‘basilisks’ were then depicted as a strange hybrid of a serpent and a bird, most often a cock. Throughout the bestiaries the interrelationships between the \textit{basilisk} and the \textit{regulus/cockatrice} were messy.\textsuperscript{62} Clearly medieval scholars lost track of the grass snake as the origin of the basilisk and its strange counterparts the \textit{regulus} and \textit{cockatrice}, and they did not know how to interpret these mythical ‘species’. Both Van Maerlant and Von Megenberg made references to several types of basilisks of which some could even fly, a belief that survived until the beginning of the seventeenth century.\textsuperscript{63}

The sixteenth century Italian naturalist Ulisse Aldrovandi described one of the strangest basilisks, an eight-legged chameleon-like monster wearing a crown (Figure 3). Another basilisk described by Aldrovandi, however, looked like a normal snake although it also wore a crown and had an arrow-like tongue. This last feature certainly referred to the malicious character of the creature, and is also depicted by Matthäus Merian, a seventeenth century Swiss-born engraver, in relation to the ‘grass snake’ \textit{Hydrus Natrix}.

In summary, there are many indications that the pre-Christian protective deity of the grass snake was transformed into the malicious basilisk simply by exaggerating certain characteristics of the species (its gaze, smell and hissing, its ability to feign death and its ‘golden crown’) and by reversing or distorting the protective qualities formerly ascribed to the grass snake. Initially, this transformation of the grass snake to the basilisk was most certainly a strategy of \textit{interpretatio christiana}. Along the way, however, (post-)medieval scholars and writers forgot about the interchangeability of the grass snake and the basilisk, and the creatures came to be seen as separate ‘species’. Unfortunately for the grass snake, this transformation also resulted in the loss of the species’ protected status, although remnants of pre-Christian beliefs survived well into the twentieth century, especially in folk and fairy tales.

\begin{footnotesize}
\begin{enumerate}
\item Wille 1728, 253. ‘\textit{die Hähne Eyer legen, woraus eine Schlange, die man einen Basilisken nennen, geboren wird, der mit seinem Anschauen tödelt, so man dieselben in einem Mist leget’}. Translation by the authors. The other type of philosopher’s stone is red, which may also be of some importance; see footnote 70.
\item White 1954 169–70.
\item Topsell (1608) is one of the first writers to doubt the existence of flying basilisks.
\end{enumerate}
\end{footnotesize}
Figure 3. ‘Basilisks’ described by Ulisse Aldrovandi in 1640 (top and middle) and several ‘grass snakes’ (bottom) engraved by Matthäus Merina in 1718. Drawings taken from Belanger Grafton 1998.
### Table 4. Grass snake motifs in Dutch and Baltic folk tales.

<table>
<thead>
<tr>
<th>Motif Description</th>
<th>Netherlands</th>
<th></th>
<th></th>
<th>Baltic</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>% of N</td>
<td>% of nᵢ</td>
<td>N</td>
<td>% of N</td>
<td>% of nᵢ</td>
</tr>
<tr>
<td><strong>TOTAL NUMBER OF FOLK TALES INVESTIGATED</strong></td>
<td>56</td>
<td></td>
<td></td>
<td>212</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>GENERAL</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Snakes wear a crown / are king</td>
<td>43</td>
<td>76.8</td>
<td>0</td>
<td>0</td>
<td>0.0</td>
<td></td>
</tr>
<tr>
<td>Snakes as symbolic of wealth</td>
<td>3</td>
<td>5.4</td>
<td>4</td>
<td>1.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Snakes whistle / sing</td>
<td>31</td>
<td>55.4</td>
<td>2</td>
<td>0.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Snakes move like hoops</td>
<td>15</td>
<td>26.8</td>
<td>1</td>
<td>0.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>RELATING TO PEOPLE</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total number of relations with people / families (nᵢ)</td>
<td>0</td>
<td>0.0</td>
<td>103</td>
<td>48.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Snakes protect people / families</td>
<td>0</td>
<td>0.0</td>
<td>0</td>
<td>3.8</td>
<td>7.8</td>
<td></td>
</tr>
<tr>
<td>Snakes directly threaten people / families</td>
<td>0</td>
<td>0.0</td>
<td>0</td>
<td>2</td>
<td>0.9</td>
<td>1.9</td>
</tr>
<tr>
<td>Snakes take revenge on people / families if mistreated</td>
<td>0</td>
<td>0.0</td>
<td>96</td>
<td>45.3</td>
<td>93.2</td>
<td></td>
</tr>
<tr>
<td><strong>RELATING TO HOUSING</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total number of relations with housing (nᵢ)</td>
<td>0</td>
<td>0.0</td>
<td>131</td>
<td>61.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Snakes live in houses / farms (in a neutral way)</td>
<td>0</td>
<td>0.0</td>
<td>90</td>
<td>42.5</td>
<td>68.7</td>
<td></td>
</tr>
<tr>
<td>Snakes protect houses / farms</td>
<td>0</td>
<td>0.0</td>
<td>0</td>
<td>36</td>
<td>17.0</td>
<td>27.5</td>
</tr>
<tr>
<td>Snakes directly threaten houses / farms</td>
<td>0</td>
<td>0.0</td>
<td>5</td>
<td>2.4</td>
<td>3.8</td>
<td></td>
</tr>
<tr>
<td><strong>RELATING TO CATTLE AND / OR MILK</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total number of relations with cattle / milk (nᵢ)</td>
<td>5</td>
<td>8.9</td>
<td>112</td>
<td>52.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Snakes as protectors of cattle</td>
<td>0</td>
<td>0.0</td>
<td>0</td>
<td>7</td>
<td>3.3</td>
<td>6.3</td>
</tr>
<tr>
<td>Snakes take revenge on cattle if mistreated</td>
<td>0</td>
<td>0.0</td>
<td>36</td>
<td>17.0</td>
<td>32.1</td>
<td></td>
</tr>
<tr>
<td>Snakes milk cows</td>
<td>3</td>
<td>5.4</td>
<td>8</td>
<td>3.8</td>
<td>7.1</td>
<td></td>
</tr>
<tr>
<td>Snakes drink milk</td>
<td>3</td>
<td>5.4</td>
<td>28</td>
<td>13.2</td>
<td>25.0</td>
<td></td>
</tr>
<tr>
<td>Snakes are being fed milk</td>
<td>0</td>
<td>0.0</td>
<td>12</td>
<td>5.7</td>
<td>10.7</td>
<td></td>
</tr>
<tr>
<td>Snakes relate otherwise to milk (poisoning and stealing)</td>
<td>2</td>
<td>3.6</td>
<td>46</td>
<td>21.7</td>
<td>41.1</td>
<td></td>
</tr>
<tr>
<td><strong>SACRIFICING TO SNAKES</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Snakes are being fed</td>
<td>1</td>
<td>1.8</td>
<td>52</td>
<td>24.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Snakes are being fed milk</td>
<td>0</td>
<td>0.0</td>
<td>12</td>
<td>5.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Snakes take revenge if not being fed</td>
<td>1</td>
<td>1.8</td>
<td>4</td>
<td>1.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>SNAKE ATTACKS</strong></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Snakes have a (deadly) poisonous bite</td>
<td>3</td>
<td>5.4</td>
<td>10</td>
<td>4.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Snakes strangle (to death)</td>
<td>1</td>
<td>1.8</td>
<td>1</td>
<td>0.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Snakes attack in large numbers</td>
<td>37</td>
<td>66.1</td>
<td>4</td>
<td>1.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Snakes can be distracted by throwing clothing over them</td>
<td>15</td>
<td>26.8</td>
<td>0</td>
<td>0.0</td>
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REMNANT PRE-CHRISTIAN MOTIFS

In order to compare the degree to which pre-Christian motifs of grass snake worship survived in folk tales from societies converted to Christianity early and late in history, we gathered and analysed such tales from the Netherlands and from Latvia and Lithuania. We collected a total of 54 grass snake folk tales from the Dutch Folk Database, especially from the north of the Netherlands, comprising tales recorded from oral tradition by employees of the Meertens Institute in the twentieth century.\(^{64}\) Two additional eighteenth century tales were found in literature.\(^{65}\) A total of 212 tales were taken from Luven (2001) for Latvia and Lithuania.\(^{66}\) Compared to the Netherlands, far more folk tales that refer to grass snakes are recorded for the Baltic. This makes clear that Christianisation has had an immense impact on the survival of house snake cult elements in folk tales. The Baltic region was Christianised approximately five centuries later than most other parts of northwestern Europe and pre-Christian beliefs may therefore have survived in Latvia and Lithuania much longer than elsewhere in Europe. A summary of the analysis of grass snake motifs in Dutch and Baltic folk tales is provided in Table 4.

There are remarkable differences between the Dutch and the Baltic tales. In Dutch tales the grass snake is often referred to as the ‘king of snakes’ or as wearing a crown (\(\text{cf.}\) the basilisk); in three of these cases people are trying to steal or otherwise obtain the snake’s crown (symbolic of wealth), a theme often recorded in other parts of Europe as well, especially in German speaking countries\(^{67}\) but hardly ever in the Baltic. Stealing from the non-Christian grass snake was apparently permitted in large parts of Europe, but not in the Baltic region. The Dutch tales are also characterised by the fact that there was always a negative connotation in the human–grass snake relationship; and this mainly concerned snakes that attacked or otherwise harmed people. Remarkably, grass snakes were often portrayed as attacking in large numbers and/or threatening people by rolling like a hoop. The latter motif is not often found elsewhere in Europe, with the exception of Scandinavia\(^{68}\) and may be a remnant reference to the ourobouros or perhaps a reference to the courtship behavior of male grass snakes, moving in circles to attract females.\(^{69}\) Only four of the attacks mentioned in Dutch folk tales resulted in a fatality, either by a poisonous bite or by strangling; in most other cases people were able to escape from the snakes, often by distracting them by throwing a coat or some other piece of clothing.

\(^{64}\) http://www.verhalenbank.nl/
\(^{65}\) Van Lier 1781.
\(^{66}\) Luven 2001, 325–460.
\(^{67}\) Rochholz 1862, 193–6; Wuttke 1869, 110–1.
\(^{68}\) Olaus Magnus 1555; edition Foote 1998, Volume III, Book 21, Chapter 48, 1135.
\(^{69}\) Typically in many Dutch folk tales a larger snake (‘the king’) is assisted by other snakes when people are trying to steal the ‘king’s crown’.
(frequently recorded as being red coloured) over them (three times). In addition, snakes are also reported as threatening people by ‘whistling’ (hissing). In only five of the examined tales was there a direct or indirect connection with cattle; either snakes that drank milk, milked cows or were otherwise linked with milk. This contrasts sharply with folk tales from the Baltic (see below). Making offerings to grass snakes in the form of food, especially milk – a motif also recorded in other, especially German-speaking countries in Europe – is rare in Dutch folk tale tradition. In just one of the retrieved tales was a girl feeding a snake mentioned.

Many significant motifs referred to in Dutch folk tales are rarely mentioned in Baltic tales (grass snakes as kings and wearing crowns, whistling, moving like hoops, attacking in great numbers, how to distract attacking snakes). Other motifs, however, score significantly higher or are more prominent in Baltic tales but are completely absent from Dutch folklore. Approximately 53 per cent of the Baltic tales referred to grass snakes’ relationships with cattle, either directly, with snakes being protective creatures or with cattle as victims of a snake’s revenge, or indirectly in relation to milk (grass snakes drinking milk, milking cows and even poisoning milk when harassed). References to snakes being offered food or milk by humans (or conversely, food or milk being withheld) or eating together with humans score significantly higher in Baltic tales. Also the connection to homes is striking, being mainly neutral in nature (grass snakes living in people’s houses or farms) but with some positive relationships mentioned (grass snakes as protective creatures) and only a few negative references (as destroyers making threats to houses and farms, albeit often after being harassed or otherwise done an injustice). A related pattern regarding the dwellers in these houses and farms is also discernible: in 96 of the investigated tales grass snakes took revenge on persons or families when harmed. In such cases, threat or damage were undone when any injustice was set right.

Generally, humans had a far more positive attitude towards grass snakes in Baltic folk tales than in Dutch tales. Apart from the possibility that there may be a geographically determined reason for this difference, it is plausible that an extra five centuries of Christianisation in the Netherlands lay behind the more negative stance towards the species.

70. The colour red may refer to the counterpart of the white philosopher’s stone, originating from the basilisk. Gardiner and Osborn (2005, 285) state that both colours are to be connected with (poisonous) snakes: red for blood, white for poison. We, however, believe that the colour white referred to the relationship of the non-poisonous grass snake with milk, symbolising its connection with cattle. Red and white are thus not to be seen as two sides of the same coin (the poisonous adder) but as wholly different coins (red for the adder, white for the grass snake). This also links up with the distinction that is made between the adder and the grass snake in Lithuanian and Latvian folklore (Luven 2001, xvii).

71. Physically snakes are unable to drink. The offering of milk to snakes is purely symbolic, expressing the gratitude of farmers towards the snake for protecting cattle.
CONCLUSIONS

Historically, human culture has clearly had a positive influence on the survival and distribution opportunities of grass snakes since the Neolithic. It is apparent from natural history sources that this was not only the case for Northern Europe but also for Central and Southern Europe, where dung heaps were also used for egg deposition. The positive influence of humans on the species resulted not only from the nesting opportunities offered by dung heaps, but also from the fact that grass snakes were considered to be chthonic deities and not to be harmed. This also makes clear that the benefits were not simply unidirectional. Although humans gained no direct physical advantages from grass snakes, the species played an important role in pre-Christian beliefs, transcending the aquatic and terrestrial worlds as well as life and death – providing a strong link to the world that ancestors lived in. Grass snakes also symbolised fertility through their relations with dung and cattle, and were mainstays in people’s everyday subsistence. The conversion of Europe to Christianity, however, marked the turning of the cultural tide for the species. From being considered divine, the grass snake was transformed into the number one symbol of the Antichrist: the basilisk. But pre-Christian beliefs and a far more positive attitude towards grass snakes survived well into the twentieth century in the Baltic region, and are possibly still present in some remote parts of Europe. Today, they have almost completely vanished in the long-Christianised Netherlands.

The mutual advantages to grass snakes and humans described in an historical context in this article make clear that co-dependency is not just a matter of the physical properties of human–non-human relationships. Non-material benefits, for instance providing humans with signs to interpret the world they inhabited, may be equally or even more important. In present discussions over nature conservation strategies of ‘land sharing’ versus ‘land sparing’, such considerations still play a very minor role. We no longer recognise that not only do we share physical habitat with our fellow creatures, but that they are also an historically grounded part of our cultural heritage. With the increasing secularisation of Europe, the witch-hunt against the grass snake has now largely come to an end. Nature conservation measures of creating ‘artificial’ reproduction sites in the form of compost and manure heaps, and incorporating such measures in our everyday environments, offer opportunities to rehabilitate the grass snake and reinstate this species’ place in our natural and cultural environments.

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