

9

Indo-European Fauna

9.1	Reconstructing Environments	132	9.4	Fish, Reptiles, and Amphibians	146
9.2	Mammals	134	9.5	Insects, Worms, and Shellfish	148
9.3	Birds	143	9.6	Indo-European Fauna	151

9.1 Reconstructing Environments

Many attempts to fix the location of the Proto-Indo-European world have depended heavily on the reconstructed vocabulary that pertains to the environment, both floral and faunal. It is often reasoned that if the reconstructed environment is specific enough, it can either indicate where the Proto-Indo-Europeans once dwelled or at least exclude territories that are incompatible with the reconstructed vocabulary. The problem with utilizing such data is logically self-evident. If an item is severely restricted in space, for example, the camel, then any Indo-European group who moved beyond the natural territory of the camel might do one of three things with their original word ‘camel’:

1. They might simply abandon the word altogether as they and their linguistic descendants were not likely to encounter a camel for the next several thousand years.
2. They might use the name ‘camel’ when they came across another animal that they were unfamiliar with but which bore some similarity in appearance or function. From the perspective of the historical linguist, we might then have to confront a situation where the original meaning ‘camel’ was (or was not) retained in those groups who lived where camels have always dwelled while other languages developed a totally different meaning for this word. The other

languages might well outnumber those who retained the original meaning or, worse, no language might retain the original meaning.

3. The population might retain the name and the meaning of ‘camel’ for thousands of years as a gesture of benevolence to future historical linguists.

Now, put so baldly, a scenario such as number three is impossible. However, it is certainly not the case that an animal or plant has to be native to the area where a particular language is spoken for the speakers of that language to have or retain a name for it. The lion has been extinct in Europe since classical times (and before then was, in any case, restricted to the Balkans) and the elephant and leopard have never shared Europe with modern humans. Nevertheless all medieval European languages had words for all three and at least the lion and the leopard played important roles in medieval and modern heraldry. Similarly, although snakes have always been absent from Ireland (even before St Patrick!), the Irish retained two inherited Indo-European names for the snake.

Illustrative of both points two and three is the history of English *elk*. When the Angles and Saxons invaded Britain from their continental homes, they were familiar with both *Alces alces* (the ‘elk’ of European English and the ‘moose’ of North American English) and *Cervus elaphus* (the ‘red deer’ of European English and the ‘elk’ of North American English) and applied those designations to members of the same two species which were also present in Great Britain. By about AD 900 *Alces alces* was extinct in Great Britain but the loss of local referents did not mean that the word ‘elk’ disappeared since the species was still familiar to some speakers because of its continued existence on the Continent (e.g. Scandinavia, Germany). However, for most speakers the referent was pretty vague, something like ‘large deer’ or the like. By 1600 or so the inherited designation for *Cervus elaphus* had been replaced by the innovative and descriptive *red deer* and by about the same time or so the species itself had disappeared from most of southern Britain except for a small number kept for the chase. At that point for most speakers of southern British English there were two terms for large deer, ‘elk’, and ‘red deer’, without well-known referents.

When some of these southern British English speakers emigrated to New England at the beginning of the seventeenth century they came to live in an environment again with both *Alces alces* and *Cervus elaphus* and they needed names for both. ‘Red deer’ was not suitable for either since neither *Alces alces* nor the North American variety of *Cervus elaphus* was noticeably red. However, ‘elk’ was available and was assigned to the commonest large deer in the new environment, *Cervus elaphus*, while a borrowing from the local Algonquian language, ‘moose’, was pressed into service for *Alces alces*.

In terms of Indo-European as a whole this case is probably not the only one whereby a word, relegated to the periphery of the lexicon and to a vague referent by environmental change, was reassigned to a new referent by yet another environmental change. In any case all three of our options pose real problems in recovering really specific evidence for the one and only Proto-Indo-European world.

9.2 Mammals

As a semantic class, the names for animals, at least mammals, are fairly abundant in the reconstructed lexicon. In reviewing the names associated with mammals, it is not always certain whether one is dealing with a domestic or a wild animal and hence all the words associated with mammals are treated together in Table 9.1.

Table 9.1. *Mammals*

* <i>k^wetwor-pod-</i>	‘animal’	Lat <i>quadrupēs</i> , Grk <i>tetráπους</i> , Skt <i>cātuṣpad-</i>
* <i>ǵhwēr</i>	‘wild animal’	Lat <i>fera</i> , Grk <i>thēr</i>
* <i>péku</i>	‘livestock’	Lat <i>pecu</i> , NE <i>fee</i> , Skt <i>páśu-</i>
*(s) <i>teuros</i>	‘large (domestic) animal’	NE <i>steer</i>
* <i>wrētos</i>	‘flock, herd’	Skt <i>wrāta-</i>
* <i>demh_a-</i>	‘tame, subdue’	Lat <i>domō</i> , NE <i>tame</i> , Grk <i>dāmnēmi</i> , Skt <i>dāmáyati</i>
* <i>g^wyéh₃wyom</i>	‘animal’	Grk <i>zōon</i>
* <i>h_{2/3}wédǵ</i>	‘creatures, (wild) animals’	
* <i>léuh₃ōn</i>	‘animal’	Grk <i>léōn</i>
* <i>wételos</i>	‘yearling’	Lat <i>vitulus</i> , Grk <i>éteion</i> , Skt <i>sa-vātára-</i>
?* <i>per-</i>	‘offspring (of an animal)’	Grk <i>pór(t)is</i> , Skt <i>pr̥thuka-</i>
* <i>kōph₂ós</i>	‘hoof’	NE <i>hoof</i> , Skt <i>śápha-</i>
* <i>k̑̎nom</i>	‘horn’	Lat <i>cornum</i> , NE <i>horn</i>
* <i>kérh₂s</i>	‘horn’	Grk <i>kéras</i>
* <i>kérh₂sǵ</i>	‘horn’	Lat <i>crābrō</i>
* <i>kóru</i>	‘horn’	Lat <i>cervus</i> , NE <i>hart</i> , Grk <i>kórudos</i>
* <i>kem-</i>	‘hornless’	NE <i>hind</i> , Grk <i>kemás</i> , Skt. <i>śáma-</i>
* <i>h₁eǵhis</i>	‘hedgehog’	Grk <i>ekh̑̎nos</i>
* <i>kasos</i>	‘hare’	NE <i>hare</i> , Lat <i>cānus</i>
* <i>werwer-</i>	‘squirrel’	Lat <i>viverra</i>
* <i>bhébhrus</i>	‘beaver’	Lat <i>fiber</i> , NE <i>beaver</i>
* <i>mūs</i>	‘mouse’	Lat <i>mūs</i> , NE <i>mouse</i> , Grk <i>mūs</i> , Skt <i>mūṣ-</i>

(Cont’d.)

Table 9.1. (Cont'd)

*pélh _x us	‘mouse’	
*g _l h ₁ is	‘dormouse?’	Lat <i>glīs</i> , Grk <i>galēē</i> , Skt <i>giri-</i>
*w _l (o)p-	‘(red)fox’	Lat <i>volpēs</i> , Grk <i>alōpós</i>
*w _l k ^w os	‘wolf’	Lat <i>lupus</i> , NE <i>wolf</i> , Grk <i>líkos</i> , Skt <i>vṛka-</i>
*w _l k ^w ih _a -	‘she-wolf’	Skt <i>vṛkī-</i>
*h ₂ t ₁ k _{os}	‘bear’	Lat <i>ursus</i> , Grk <i>árktos</i> , Skt <i>īkṣa-</i>
*k(u)wōn	‘dog’	Lat <i>canis</i> , NE <i>hound</i> , Grk <i>kúōn</i> , Skt <i>śvā</i>
*udrós	‘otter’	Lat <i>lutra</i> , NE <i>otter</i> , Grk <i>énudris</i> , Skt <i>udrá-</i>
*keĕk-	‘polecat’	Skt <i>káśa-</i>
?*lōk-	‘weasel’	
?*bhel-	‘± marten; wildcat’	Lat <i>fēlis</i> , Skt <i>bharuja-</i>
*h ₁ ék _{wos}	‘horse’	Lat <i>equus</i> , Grk <i>hippos</i> , Skt <i>ásva-</i>
*h ₁ ék _w eh _a -	‘mare’	Lat <i>equa</i> , Skt <i>ásvā-</i>
??*os(o)nos	‘ass’	Lat <i>asinus</i> , Grk <i>ónas</i>
*sūs	‘pig (wild or domesticated)’	Lat <i>sūs</i> , NE <i>sow</i> , Grk <i>hūs</i> ~ <i>sūs</i> , Skt <i>sūkará-</i>
*pór _{kos}	‘young pig, piglet’	Lat <i>porcus</i> , NE <i>farrow</i>
?*twor _{kos}	‘boar’	
*h ₁ elh ₁ ēn	‘red deer’	Grk <i>élap_{hos}</i>
*h _x ólk _{is}	‘elk/American moose’	Lat <i>alcēs</i> , NE <i>elk</i> , Skt <i>śśya-</i>
*g ^w óus	‘cow’	Lat <i>bōs</i> , NE <i>cow</i> , Grk <i>boūs</i> , Skt <i>gáu-</i>
*h ₁ eĝh-	‘cow’	Skt <i>ahī-</i>
*wo _k éh _a -	‘cow’	Lat <i>vacca</i> , Skt <i>vaśá-</i>
*uk ^(w) sēn-	‘ox’	NE <i>ox</i> , Skt <i>ukán-</i>
?*domh _a yos	‘one to be tamed, young bull’	Skt <i>dāmya-</i>
*tauros	‘aurochs; bull’	Lat <i>taurus</i> , Grk <i>taūros</i>
?*usr-	‘aurochs’	Skt <i>usrá-</i>
*h ₂ ówis	‘sheep’	Lat <i>ovis</i> , NE <i>ewe</i> , Grk <i>óis</i> , Skt <i>ávi-</i>
*h ₂ owikéh _a -	‘ewe’	Skt <i>avikā-</i>
*w _l h ₁ ēn	‘lamb’	Grk <i>arēn</i> , Skt <i>urán-</i>
*moisós	‘ram, sheep; fleece, skin’	Skt <i>meśá-</i>
?*(s)kēgos	‘sheep/goat’	NE <i>sheep</i> , Skt <i>chāga-</i>
*h ₁ eri-	‘sheep/goat’	Lat <i>ariēs</i> , Grk <i>érip_{hos}</i> , Skt <i>āreya-</i>
*dīks	‘goat’	
*h _a eīĝs	‘goat’	Grk <i>aik_s</i>
*bhugós	‘buck, he-goat’	NE <i>buck</i> , Skt <i>bukka-</i>
*h _a eĝós	‘he-goat’	Skt <i>ajā-</i>
*kápros	‘he-goat’	Lat <i>caper</i>
*h ₄ eli-	‘he-goat’	
??*(y)ebh-	‘elephant’	
??*lebh-	‘ivory’	

Terms for mammals, both wild and domesticated, are relatively abundant compared with many other semantic categories. There are a number of basic terms for animals that focus on different aspects. For example, **k^wetwor-pod-* ‘animal’ is transparently a ‘four-footer’ and the word is attested in six different groups (Lat *quadrupēs*, Lith *keturkōjis*, Alb *shtazë*, Grk *tetrápous*, Skt *cátuspad-*, Toch B *stwerpew*). The word **ǵhwēr* ‘wild animal’ (e.g. Lat *fera* ‘wild animal’, Lith *žvėris* ‘wild animal’, OCS *zvěrī* ‘wild animal’, Grk *thēr* ‘wild animal’; cf. the derived verb in Toch B *šeritsi* ‘to hunt’ [wild animals]) contrasts in meaning with **péku* ‘livestock’ which exclusively denotes domestic animals or possessions (e.g. Lat *pecu* ~ *pecus* ‘cattle, livestock’, OE *feoh* ‘livestock, property, money’ [> NE *fee*], Lith *pėkus* ‘cattle’, Av *pasu* ‘cattle’, Skt *pásu-* ‘cattle’). The **(s)teuros* ‘large (domestic) animal’ is attested in Germanic (e.g. NE *steer*), Iranian (e.g. Av *staora-* ‘large [domestic] animal [i.e. horse, cow, camel]’), and Alb *ter* ‘bullock’ (in meaning this word has been drawn to the phonetically similar **tauros* ‘aurochs, bull’). The term for an animal collective may have been **wrētos* ‘flock, herd’ although cognates are limited to Germanic (e.g. OE *wrāþ* ‘herd of swine’) and Skt *vrāta-* ‘flock, swarm’ which may have been formed on the verbal root **wer-* ‘bind’. The nuanced meaning of **demh_a-* ‘tame, subdue’ is of considerable interest and difficulty. The word is supported by cognates in seven groups: Celtic (OIr *dammaid* ‘binds, breaks [a horse]’), Lat *domō* ‘break, tame’, Germanic (e.g. NE *tame*), Grk *dámnēmi* ‘break’, Hit *damaszi* ‘presses, pushes’, NPers *dām* ‘tamed animal’, Skt *dāmáyati* ‘subdues’. There are specific associations with horse-breaking in Celtic, Latin, Greek, and Indic, e.g. the Sanskrit agent noun *damitár-* ‘(horse) breaker’. But the meanings also extend to other animals, e.g. OIr *dam* ‘ox’, and frequently refer to the subduing of human opponents in Greek and other groups; also the Hittite cognate does not have a specific association with the maintenance of animals. This word has variously been seen to be an independent root or an o-stem derivative of **dem(h_a-* ‘build (a house)’ on the argument that the act of taming is literally ‘domestication’.

PIE **g^wyéh₃wyom* ‘animal’ (Grk *zōon* ‘animal’, Toch B *šaiyye* ‘sheep/goat’) is built on the root **g^wyeh₃-* > **g^weih₃-* ‘to live’ and hence relates to living beings while the poorly attested (in ON *vitnir* ‘animal, wolf’ and Hit *huetar* ‘creatures, [wild] animals, wolfpack’ only) **h_{2/3}wéd-* ‘creatures, (wild) animals, wolves’ also seems to derive from an unattested verb ‘to live’, **h_{2/3}wed-*; it is a heteroclitic *r/n*-stem which argues for antiquity and it has some possible Slavic cognates associated with ‘werewolves’ (e.g. Slov *vedevac* ‘werewolf’). Proto-Indo-European **léuh_xōn* ‘animal’ rests only on Greek (*léōn* ‘lion’) and Tocharian (e.g. Toch B *luwo* ‘animal’) evidence and gives us ultimately through a series of loans (Greek > Latin > English) our NE word *lion*. A yearling, **wételos*, is attested in three stocks (e.g. Lat *vitulus* ‘calf, yearling’, Grk *éteion*

‘yearling’, Skt *sa-vātāra-* ‘having the same calf’) and gives us, among other words, the name of Italy, i.e. ‘land of young cattle’; a related formation gives NE *wether*. The status of **per-* ‘offspring (of an animal)’ is doubted because a number of groups may have created nouns from the verbal root **per-* ‘appear, bring forth’ independently (e.g. OE *fearr* ‘bullock, steer’, Grk *póris* ~ *pórtis* ‘calf, heifer’, Skt *pr̥thuka-* ‘child, young of an animal’).

A number of anatomical terms apply specifically to animals. The word for ‘hoof’, **k̥oph₂ós*, is attested in Germanic (e.g. NE *hoof*), Slavic (e.g. Rus *kopyto* ‘hoof’), and Indo-Iranian (e.g. Av *safa-* ‘hoof’, Skt *śápha-* ‘hoof, claw’). There are a number of words for ‘horn’ but all built out of the same basic root, **k̥er-* ‘horn’, i.e. **k̥r̥nom* (e.g. Lat *cornum*, NE *horn*), **k̥érh₂(s)* (e.g. Grk *kéras*, Toch B *karse* ‘stag’ [*< *‘horned one’*]), **k̥érh₂sr̥* (e.g. Lat *crābrō* ‘hornet’, Lith *širšuō* ‘hornet’, Toch B *kror̥ya* ‘horn’), and **k̥óru* ‘horn’ (e.g. Lat *cervus* ‘stag’, Lith *kárvė* ‘cow’, Rus *koróva* ‘cow’, Grk *kórudos* ‘crested lark’, *koruphḗ* ‘crest [of mountain or horse]’, Av *srva-* ‘horn; claw, talon’). There is a wide range of animals designated **k̥em-* ‘hornless’ (Skt *śáma-* ‘hornless’), e.g. ‘hind’ in English and Greek (*kemás* ‘young deer’), ‘sheep’ in Old Prussian (*camstian*), and ‘horse’ in Russian (*koni*) and Old Prussian (*camnet*). The hornless sheep in Old Prussian and the ‘hornless’ horses of Russian and Old Prussian are both presumably in contrast to the other major domesticated animal, horned cattle.

The number of wild mammals’ names attributable to Proto-Indo-European is reasonably extensive. If we work our way systematically beginning with the insectivores, we have only the ‘hedgehog’, **h₁eǵhis*, whose name survives in Germanic (e.g., OE *igil*), Baltic (e.g. Lith *ežỹs*), Slavic (e.g. Rus *ež*), Grk *ekhḗnos*, Arm *ozni*, Phrygian *ezis*, and Iranian (Oss *wyzyn*).

The sole lagomorph is the **k̥asos* ‘hare’ (e.g. NE *hare*, OPrus *sasins*, Skt *śásá-*), whose name derives from the adjective ‘grey’ (or, just possibly, the adjective ‘grey’ was originally ‘hare-coloured’ or the like)—compare Lat *cānus* (*< *k̥asnos*) ‘grey’.

Several rodents are known and these comprise the ‘squirrel’, **werwer-*, attested in six groups, e.g. ScotsGael *feòrag*, Lat *vīverra*, OE *āc-weorna* (*< *‘oak-squirrel’*), Lith *vėveris*, Rus *vėverica*, and OPers *varvarah*; the ‘beaver’, **bhébhrus* (e.g. Gaul *bebru-*, Lat *fiber*, NE *beaver*, Lith *bebrūs*, Rus *bobr*, Av *bawra-*), which also exhibits a derivative **bhebhriinos* ‘pertaining to beavers’. (India lacked the beaver and there we find a *babhrú-* ‘mongoose’.) There are three words for the mouse, i.e. the ubiquitous (nine groups) **mūs* ‘mouse’ (e.g. Lat *mūs*, NE *mouse*, OCS *myšī*, Alb *mi*, Grk *mūs*, Arm *mukn*, NPers *mūs*, Skt *mūś-*, all ‘mouse’, and Toch B *maścīsi* ‘mice, rats’) that derives from the verb **meus-* ‘steal’; **pélh_xus*, another name presumably derived from the adjective ‘grey’ (e.g. OIr *luch*, Rus *polokhók*, Shughni [an Iranian language of the Pamirs] *pürg*); and **g̥l̥h₁ís* (Lat *glīs* ‘dormouse’, Grk *galḗē* ‘weasel’ [*< *‘mouser’*],

Bakhtiari [an Iranian language] *girza* ‘rat’, Skt *giri-* ‘mouse’) which possibly specified the ‘dormouse’.

The major carnivores, at least those that preyed on livestock or were a potential threat to humans, are well represented although often showing substantial independent re-formation. This is the case with **wl(o)p-* ‘fox’ (e.g. Lat *vulpēs*, Lith *lāpė*, Grk *alōpēks* ~ *alōpós*, Arm *aluēs*, Hit *ulip(pa)na-* ‘wolf’, Av *urupis* ‘dog’, *raopi-* ‘fox, jackal’, Skt *lopāśá-* ‘jackal, fox’), for example, which boasts at least six different potential proto-forms. The word for ‘wolf’, **wĺk^wos* and its feminine *i*-stem derivative, are widely attested (**wĺk^wos* is found in ten groups: Lat *lupus*, NE *wolf*, Lith *vilkas*, Rus *volk*, Alb *ujk*, Grk *lúkos*, Av *vəhrka-*, Skt *vīka-*, Toch B *walkwe*). The word uniformly means ‘wolf’ in all groups but Anatolian (e.g. Luv *walwa/i-*) which preserves a meaning ‘lion’, and the word has been variously explained as a nominalization of the unattested adjective ‘dangerous’ (**wĺk^wó-*) or derived from a verbal root **wel-* ‘tear’. In either case, the different semantic specifications of ‘the dangerous one’ or ‘the tearer’ in Anatolian and the rest of Indo-European may suggest semantic shift as one (the Anatolians) or the other (residual Indo-Europeans) moved into a new territory (as Greece and the Balkans also possessed lions, it is perhaps more likely that it is the Anatolians who innovated). The word for ‘bear’, **h₂ítkos* (e.g. OIr *art*, Lat *ursus*, Alb *ari*, Grk *árktos*, Arm *ar*, Av *arəša-*, Skt *īkṣa-*, all ‘bear’, and Hit *hart(ag)ga-* ‘a cultic official, bear-man’), has been similarly explained as a nominalized ‘destroyer’. The root, **h₂retk-*, is otherwise seen only in Skt *rākṣas-* ‘destruction, damage; night demon’. The Bear also is used to designate *Ursa Major* (the Plough or Big Dipper) not only in Latin but also in Greek and Sanskrit. The word for ‘dog’, **k(u)wōn*, is one of the most widely attested words in Indo-European (OIr *cū*, Lat *canis*, OE *hund* [> NE *hound*], Lith *šuo*, Rus *súka* ‘bitch’, Grk *kúōn*, Arm *šun*, Av *spā*, Skt *śvā*, Toch AB *ku*, all ‘dog’, Hit *kuwan-* ‘dog-man’). While it may seem somewhat surprising that in contrast to words for cattle, sheep, goats, and pig, we have only one solidly attested word for the dog, the oldest domesticated animal, in Indo-European, English is similarly served and once we have worked our way through the usual ‘pooch’, ‘bow-wow’, ‘puppy’, ‘bitch’, ‘cur’, and ‘mongrel’ in *Roget’s International Thesaurus* most of the remaining words are attributive, e.g. ‘police dog’, ‘sniffer dog’. The selective breeding of dogs does not appear to have begun till the later prehistoric period.

The smaller carnivores include the **udrós* ‘otter’ (attested in seven groups: e.g. Lat *lutra*, NE *otter*, Lith *údra*, Rus *výdra*, Grk *énudris*, Av *udra-*, Skt *udrá-*) which is formed from the word for ‘water’, **wódr-*; the **keḱ-*, attested in only Baltic (e.g. Lith *šėškas*) and Indic (Skt *káśa-*), refers to a ‘polecat’ or ‘weasel’ respectively. The original referent may have been specifically the ‘polecat’ if one accepts the Balto-Slavic-Iranian correspondence (e.g. Latv *luoss*, Rus *láska*,

NPers *rāsū*) that presupposes Proto-Indo-European **lōk-* which uniformly designates the ‘weasel’. Far more ambiguous is the root **bhel-* which is found in NWels *bele* to mean ‘marten’, Lat *fēlis* to mean any small carnivore (from marten to wild cat), and just possibly Skt *bharuja-* ‘jackal’. It could mean either a ‘marten’ or a ‘wild cat’ or possibly some other small carnivore.

The ungulates are the best attested of the mammals. The word for ‘horse’, **h₁ék_wos*, is nearly universal (e.g. OIr *ech*, Lat *equus*, OE *eoh*, Grk *hippos*, Av *aspa-*, Skt *ásva-*, Toch B *yakwe*, HierLuv *azu(wa)-*, all ‘horse’, Lith *ašvėnis* ‘stallion’, perhaps Arm *ēš* [this may be an unrelated loanword for ‘ass’], and perhaps surviving in Alb *sasë* ‘horsetail rush, *Equisetum spp*’ [presuming a compound where **h₁ék_wo-* is the first element]). absent only in Slavic for sure, while the feminine form, **h₁ék_weh_a-* ‘mare’, is known from four groups (Lat *equa*, Lith *ešvā ~ ašvā*, Av *aspā*, Skt *ásvā-*). The status of the animal, whether wild or domesticated, is a major issue of Indo-European studies and will be dealt with later. The word for the ‘ass’ (**os(o)nos*) is a long shot that requires a genetic relationship between Lat *asinus*, Grk *ónos*, and Luv *tarkasna-* (if from a compound **tarka-asna-* ‘draft-ass’), when there are grounds to suspect that the word was borrowed among these different languages. Far more solid attestation comes for the words for the ‘pig’, **sūs* (eight groups: e.g. Lat *sūs* ‘pig’, NE *sow*, Latv *suvēns* ‘young pig’, Alb *thi* ‘pig’, Grk *sūs ~ hūs* ‘pig’, Av *hū-* ‘pig’, Skt *sūkará-* ‘pig, boar’, Toch B *suwo* ‘pig’), and its young, **pórkos* ‘young pig, piglet’ (e.g. MIr *orc* ‘young pig’, Lat *porcus* ‘young pig’, OE *feorh* ‘pig’ [cf. NE *farrow*], Lith *pařsas* ‘young pig; castrated male hog’, Rus *porosėnok* ‘young pig’, Av *pəřasa-* ‘young pig’), which appears to derive from a root **perk-* ‘dig, root up the earth’ (which is not attested as a verb but which also appears in NE *furrow*); this word was also borrowed into the Uralic languages (e.g. Finnish *parsas* ‘pig’). Less certain (only an OIr *torc* and Av *θβəřasa-*, cognate) is **tworkós* ‘boar’.

The ‘red deer’ or ‘elk’ (to North Americans), **h₁elh₁ēn*, is well attested in eastern and central Europe and has an Asian cognate in Tocharian which designates ‘gazelle’ (e.g. Lith *ėlnis*, Rus *olenī*, Grk *élahos*, all ‘red deer’, Arm *eln* ‘hind’, Toch B *yal* ‘gazelle’); the larger ‘elk’ or for North Americans, ‘moose’, **h_xólkis*, shows a similar pattern of semantic shift where it means ‘elk’ in the European languages but refers to ‘wild sheep’ or ‘antelope’ among the Asian groups (e.g. NE *elk* [Lat *alcēs* is borrowed from West Germanic], Rus *losī* ‘elk’, Khot *rūs-* ‘*Ovis poli*’, Skt *řśya-* ‘male of antelope’). This whole group of words is presumably related to **h₁elu-* ‘dull red’ (Section 20.4) and the animals denoted by the colour of their hair (cf. the British English designation ‘red deer’).

Terminology relating to cattle is abundant and includes three different words for ‘cow’, i.e. **g^wóus* (e.g. OIr *bō*, Lat *bōs*, NE *cow*, Latv *guovs*, ?Alb *ka*, Grk

boūs, Arm *kov*, HierLuv *wawa-*, Av *gāuš*, Skt *gáu-*, Toch B *keu*, all ‘cow’, OCS *govęždī* ‘of cattle’; **h₁eǵh-* (e.g. OIr *ag* ‘cow’, Arm *ezn* ‘cow’, Skt *ahī-* ‘cow’); and **wokéh_a-* (Lat *vacca* ‘cow’, Skt *vaśā-* ‘cow’) with no clear semantic difference between the three although the first is found in virtually all major groups of Indo-European. The male is more specifically designated by **uk^(w)sēn-* ‘ox’ as in OIr *oss* ‘stag, cow’, NWels *ych* ‘ox’, NE *ox*, Av *uxšan-* ‘bull’, Skt *ukṣán-* ‘bull’, Toch B *okso* ‘ox’ (another term for ‘bull’, **domh_ayos* ‘one to be tamed; young bull’, is known only from Alb *dem* ‘bull, steer’ and Skt *damyā-* ‘[young bull] to be tamed’, and they may be independent creations). The name of the wild cattle of Eurasia, **tauros* (e.g. OIr *tarb* ‘bull’, Lat *taurus* ‘bull’, OPrus *tauris* ‘bison’, Lith *taūras* ‘bull; aurochs’, Rus *tur* ‘aurochs; mountain goat’, Grk *taūros* ‘bull’, Alb *tarok* ‘bullock’, Khot *ttura-* ‘mountain goat’), preserves such a meaning, i.e. ‘aurochs’ where the aurochs survived as a species until the historic period but otherwise shifted to ‘bull’, most probably because the aurochs was much larger and more aggressive than early domestic cattle (alternatively, sexual dimorphism among aurochsen was such that the bulls were very much larger than the cows). A more controversial set of possible cognates supports a PIE **usr-* ‘aurochs’ (which retains such a meaning in Germanic, e.g. OE *ūr* ‘aurochs’, OHG *ūro* ~ *ūrochso* ‘aurochs’, but in the putative Indo-Iranian cognates may mean anything from ‘bull’ to ‘camel’, e.g. Skt *usrā-* ‘bull’, *usrā-* ‘cow’, Pashto *ūš* ‘camel’). It may be significant for emphasizing the long-standing association of Indo-European peoples and their cattle that we can possibly reconstruct a word, **g^wou-sth₂-ó-*, for ‘sheltered place where cattle can lie down for the night’ on the basis of Skt *goṣṭhá-* ‘sheltered place for cattle’ and Celtiberian *boustom* ‘± cattle stall’ (presuming these are not independent creations).

The word for ‘sheep’, **h₂ówis*, comes a close second to the word for ‘cow’ as it is attested in eleven of the main groups (e.g. OIr *oī* ‘sheep’, Lat *ovis* ‘sheep’, NE *ewe*, Lith *avis* ‘sheep’, OCS *ovīnū* ‘sheep’, Grk *óis* ‘sheep’, Arm *hoviw* ‘shepherd’, Luv *hāwa/i-* ‘sheep’, Skt *ávi-* ‘sheep’, TochB *āu* ‘ewe’). The feminine derivative, **h₂owikéh_a-* ‘ewe’, is found in three groups (e.g. NWels *ewig* ‘hind’, OCS *ovīci* ‘ewe’, Skt *avikā-* ‘ewe’) while the young, **wǵh₁én* ‘lamb’, is found in Grk *arén*, Arm *garn*, Indo-Iranian (Av *varən-*, Skt *urán-*), and perhaps Tocharian (Toch B *yrīye*) and may be a later regional term. A product of the sheep is suggested by **moisós* which can mean both ‘ram, sheep’ but also ‘fleece, skin’ (e.g. Lith *maišas* ‘bag’, Rus *mekh* ‘skin’, Av *maēša-* ‘ram’, Skt *meśá-* ‘ram, sheep; fleece, skin’, Hit *maista-* ‘strand of wool’). Reconstruction of a PIE **(s)kēgos* ‘sheep/goat’ depends on relating a series of Germanic words (e.g. NE *sheep*, OE *hēcen* ‘kid’) to a strong set of Indo-Iranian ones (e.g. Oss *sæγ* ‘she-goat’, Skt *chāga-* ‘he-goat’). Another word for ‘sheep/goat’ (**h₁eri-*) gives words for ‘lamb/kid’ in Grk *éripfos* ‘young of a goat’, Baltic (OPrus *eristian* ‘lamb’, Lith *ėras* ‘lamb’), Arm *oroj* ‘lamb’, and

perhaps Tocharian (Toch B *yrīye* ‘lamb’) and words for ‘ram’ in Italic (e.g. Lat *ariēs*), Indic (Skt *āreya-*), and Tocharian (Toch B *ariwe*); in Celtic the same word is extended to fallow deer (OIr *heirp* ‘she-goat; fallow deer’).

Words for ‘goat’ are never quite so abundantly attested as those for the economically more important ‘sheep’ but four words can be assigned to Proto-Indo-European antiquity. PIE **diks* ‘goat’ can designate the ‘she-goat’ in several languages (e.g. OE *ticcen* ‘kid’, Alb *dhi* ‘she-goat’, ?Grk *dīza* ‘she-goat’, Ishkashmi [an Iranian language of the Pamirs] *dec* ‘goatskin bag’) and a similar range of meaning is associated with **h_aeig̃s* ‘goat’ with a range of cognates such as Alb *edh* ‘kid’, Grk *aiks* ‘[she-]goat’, Arm *aye* ‘[she-]goat’, and Av *izaēnā-* ‘goathide’. All the other terms relate to the male, i.e. **bhuǵos* ‘buck, he-goat’ (OIr *boc* ‘buck’, NE *buck*, Arm *buc* ‘lamb’, Av *būza-* ‘[he-]goat’, Skt *bukka-* ‘[he-]goat’); **h_aeǵós*, which would appear to derive from the verbal root **h_aeǵ-* ‘drive’ (e.g. Lith *ožỹs* ‘he-goat’, Av *aza-* ‘he-goat’, Skt *ajá-* ‘he goat’); **kápros* (e.g. OIr *gabor* ‘he-goat’, Lat *caper* ‘he-goat’, OE *hæfer* ‘he-goat’, NPers *kahra* ‘kid’) which derives from **kápr̥* ‘penis’; and **h₄eli-* (Toch B *āl* ‘ram, he-goat’, Hit *aliyan(a)-* ‘roebuck’—one should note that roebuck have very undeerlike horns, horns that are closer to those of goats than to those of other deer).

Words associated with the elephant receive some attestation, i.e. **(y)ebh-* ‘elephant’ (Lat *ebur*, Skt *ibha-*) and **lebh-* ‘ivory’ (Myc *e-re-pa*, Grk *eléphās* and Hit *lahpa-*). There are those who would claim that they are both Proto-Indo-European (and indicate an Asian homeland), but the word for elephant is close enough to the Egyptian word (*3bw*) to suggest a *Wanderwort* and objects of ivory were widely traded in the eastern Aegean during the Bronze Age, and borrowing is usually, and surely correctly, suspected here as well.

Regional sets of cognates for mammals include the following: [North-Western] **kormon-* ‘weasel, ermine/stoat’ (e.g. OHG *harmo* ‘stoat’, Lith *šarmuō* ‘wild cat; ermine, weasel’); **meli-* ‘badger’ (Lat *mēlēs*, Slovenian *melc* ‘badger’); **kat-* ‘cat’ (Lat *cattus*, but a late loanword perhaps associated with the spread of the domestic cat from Egypt, cf. Nubian *kadīs* ‘cat’, which was in turn widely borrowed by many other European languages); **márkos* ‘horse’ (e.g. OIr *marc* ‘horse’, NE *mare*) and attested only in Celtic and Germanic—some would attempt to relate it to words of east Asia, e.g. Mongol *morin*; **keul-* ‘pig’ (Celtic [MWels *Culhwych*, a mythological figure associated with swineherds and boar-hunting] and Baltic [Lith *kiāule* ‘pig’]); **h₁elh₁nīh_a-* ‘hind/cow-elk’ (e.g. NWels *elain*, Lith *élnė*, OCS *lani* ~ *alni*, all ‘hind’), the feminine derivative from the more widely attested PIE **h₁elh₁ēn* ‘red deer’; **wis-* and/or **ǵ(h)ombhros* ‘bison’ (the first is found in Germanic, e.g. OHG *wisant* [whence by borrowing Lat *bisōn*], the second in some of the Baltic languages, e.g. Lith *stuñbras*, Latv *subrs*, and Slavic, e.g. Rus *zubr*, while OPrus *wis-sambris* ‘bison’, combines the two); and **ghaidos*

‘goat’ (e.g. Lat *haedus*, NE *goat*). Those words with a West Central distribution include **meh₁l-* ‘small animal’ (e.g. OIr *mīl* ‘(small) animal’, NDutch *maal* ‘young cow’, with an initial *s*-mobile, this root gives us NE *small*, Grk *mēlon* ‘sheep, goat’); **dibhro-* ~ **dībhro-* ‘(sacrificial) animal’ (Gothic *tibr* ‘sacrifice’, OE *tīber* ‘offering’, MHG *ungezibere* ‘vermin’ [*<* ‘animals unsuited for the sacrifice’]), OHG *zebar* ‘offering’ [the only form requiring **dibhro-*], Arm *tvar* ‘male sheep, herd of cattle’, perhaps a compound whose second member is **bher-* in the latter’s meaning of ‘offer sacrifice’ but the initial part is obscure; **ghēr* ‘hedgehog’ (Lat *ēr*, Grk *khēr*), the regional word in Latin and Greek; **sw(o)r-* or **sworaks* ‘shrew’ (e.g. Lat *sōrex*, Latv *sussuris*, Bulg *sāsar*, Grk *hūraks*, all ‘shrew’); possibly **(s)koli-* ‘young dog’ (e.g. Lith *kāle* ‘bitch’, Alb *kēlysh* ‘young dog’, Grk *skūlaks* ‘young dog; young animal’); **wailos* ‘wolf’ (an Irish-Armenian isogloss, OIr *fāel* ‘wolf’, Arm *gayl* ‘wolf’, possible from the ‘wail’ of the wolf); **dhóh_aus* ‘± wolf’ (Phryg *dāos* ‘wolf’, Grk *thōs* ‘jackal; wild dog; panther’, a derivative of which gives Lat *faunus* ‘deity of forests and herdsmen’ with its neo-Lat *fauna*); **(h_a)wiselo-* ‘weasel’ (e.g. Nir *fial* ‘ferret’, NE *weasel*) may be a North-Western word if one does not accept a potential Greek cognate (*aiélouros* ‘cat; weasel’); **luĕ-* ‘lynx’ (e.g. OIr *lug*, OE *lox*, Lith *lūšis*, Rus *rysĭ*, Grk *lūgks*, Arm (pl.) *lusanunk* ‘, all ‘lynx’; NE borrows its *lynx* from Greek rather than continues the inherited form in OE *lox*); **li(w)-* ‘lion’ (in Slavic, e.g. Rus *lev*, and Greek, i.e. *līs*, the latter suspected by some to be a borrowing from Hebrew *layiw* ‘lion’); **mú(k)skos* ‘ass/donkey’ (e.g. Lat *mūlus* ‘mule’, ORus *mūskū* ‘mule’, Grk *mukhlós* ‘he-ass’); **h₁eperos* ‘boar’ (e.g. Lat *aper*, OE *eofor*, Rus *veprĭ*), a North-Western word whose distribution may be extended by a possible Thracian cognate (*ébro*s ‘buck’); **bhrentós* ‘stag’ (Germanic-Messapic isogloss, e.g. Swed *brinde* ‘stag’, Messapic *bréndon* ‘stag’), a Celtic-Greek **yórks* ‘roedeer’ (e.g. NWels *iwrch*, Grk *zórks*); **loh_apo-* ‘cow’ (Baltic-Albanian, i.e. Latv *luōps* ‘cow’, Alb *lopĕ* ‘cow’); **h_aeg^whnos* ‘lamb’ (Lat *agnus*, NE *yeau*, OCS (*j*)*agnę*, Grk *amnós*); and possibly **koĝhéh_a-* ‘goat’ (Slavic-Albanian, e.g. OCS *koza* ‘she-goat’, Alb *kedh* ‘kid’). There are a handful of words confined to the Indo-European centre such as **mendyos* ‘horse’ (where the Romanian *mînz* preserves a Dacian word and is compared to Alb *mëz* ‘foal’) and **ghor-* ‘young pig’ (Alb *derr* ‘pig, hog, swine’, Grk *khoîros* ‘young pig; swine’). There are also several isoglosses that span the centre and east, e.g. **ghéyos* ‘horse’ (Arm *ji* ‘horse’ and Skt *háya-* ‘horse’, both derived from **ghei-* ‘impels, drives’). Several big cat words have exclusively Central and Eastern distributions, e.g. **sinĝhós* ‘leopard’ (where it means ‘leopard’ in Arm *inj* ~ *inc* but ‘lion’ in Skt *simhá-*); and **perd-* ‘panther, lion’ (where there are several Iranian cognates, e.g. NPers *palang*, and Grk *párdalis* which may be a loanword). Finally, there is **gordebhós* ‘wild ass’, an Eastern word which is attested in Skt *gardabhá-* and Toch B *kercaĝo*.

Table 9.2. *Birds*

* <i>h_aewei-</i>	‘bird’	Lat <i>avis</i> , Grk <i>aietós</i> , Skt <i>vi-</i>
* <i>pipp-</i>	‘young bird, nestling’	Lat <i>pipō</i> , Grk <i>pīpos</i> , Skt <i>pīppakā-</i>
* <i>h_aō(w)i-om</i>	‘egg’	Lat <i>ōvum</i> , NE <i>egg</i> , Grk <i>ōión</i>
* <i>ger-</i>	‘crane’	Lat <i>grūs</i> , NE <i>crane</i>
* <i>kVr-C-</i>	‘crow; raven’	Lat <i>corvus</i> , NE <i>rook</i>
* <i>wer-</i>	‘crow’	
* <i>kukū</i>	‘cuckoo’	Lat <i>cucūlus</i> , NE <i>cuckoo</i>
* <i>h_ah_ati-</i>	‘duck’	Lat <i>anas</i> , Grk <i>nēssa</i> , Skt <i>ātí-</i>
* <i>pad-</i>	‘duck, teal?’	
* <i>h₃or-</i>	‘eagle’	NE <i>erne</i> , Grk <i>órnis</i>
* <i>teter-</i>	‘gamebird’	Grk <i>tetráōn</i> , Skt <i>tittirá-</i>
* <i>ghan-s</i>	‘goose’	Lat <i>ānser</i> , NE <i>goose</i> , Grk <i>khén</i> , Skt <i>hamṣa-</i>
* <i>kerk-</i>	‘hen’	Grk <i>kérkos</i> , Skt <i>kṛka-váku-</i>
* <i>h₁epop</i>	‘hoopoe’	Lat <i>upupa</i> , Grk <i>épops</i>
* <i>kik-(y)eh_a-</i>	‘jay’	Grk <i>kíssa</i> , Skt <i>kiki-</i>
* <i>h_{2/3}uh₁e/olo-</i>	‘owl’	NE <i>owl</i>
?* <i>b(e)u-</i>	‘owl’	Lat <i>būbō</i> , Grk <i>búas</i>
?* <i>ulu-</i>	‘owl’	Lat <i>ulu(c)us</i> , Skt <i>úlūka-</i>
* <i>sper-</i>	‘?sparrow’	NE <i>sparrow</i> , Grk <i>sparásion</i>
* <i>(s)ter-</i>	‘stork’	NE <i>stork</i>
* <i>(s)p(e)iko/eh_a-</i>	‘bird, woodpecker’	Lat <i>pīcus</i> , Skt <i>piká-</i>

9.3 Birds

The primary word for ‘bird’ (**h_aewei-*) is well attested and found in Celtic (e.g. NWels *hwyad* ‘duck’), Italic (e.g. Lat *avis* ‘bird’), Alb *vida* ‘dove’, Grk *aietós* ‘eagle’, Arm *haw* ‘bird; chicken’, Indo-Iranian (e.g. Av *vīš*, Skt *vi-*). As we can see, it reveals semantic shifts to a variety of very different species, e.g. ‘duck’, ‘dove’, ‘chicken’, and ‘eagle’. The word for the young bird, **pipp-*, is transparently onomatopoeic (e.g. the Latin derivative means ‘peep’) and is attested in Slavic (e.g. Slov *pípa* ‘hen’), Alb *bibë*, Grk *pīpos* ‘young bird’, and Indic (Skt *pīppakā-*) as well. The word for ‘egg’, **h_aō(w)i-om* (attested in Celtic (e.g. NWels *wy*), Italic (e.g. Lat *ōvum*), Germanic (e.g. German *Ei*), Slavic (e.g. OCS *ajīce*), Grk *ōión*, and Iranian (e.g. Av *-āvaya* ‘having eggs’), is suspiciously close to the primary word for ‘bird’ (**h_aewei-*) and, indeed, a fairly transparent derivative of it; if so, it provides a proxy answer to the age-old question since here the bird came first and the egg second. NE *egg* does not derive directly from the proto-form (as did *æg* in OE) but is a loanword from Old Norse (see Section 13.2 for ‘nest’).

The name of the ‘crane’ (**ger-*) is one of the better-attested bird names and is found in Celtic (e.g. NWels *garan*), Italic (Lat *grūs*), Germanic (e.g. NE *crane*), Baltic (e.g. Lith *gėrvė*), Slavic (e.g. Rus *žeravlj* ‘crane, goose’), Arm *kṛunk*, and, securing an Asian cognate, Oss *zyrnæg*. The word for ‘crow’, **kVr-C-*, is more problematic in that it is clearly onomatopoeic and the root vowel is unclear. It is attested in Italic (e.g. Lat *corvus*), Germanic (e.g. NE *rook*), Slavic (Bulg *krókon*), Grk *kóraks*, and Skt *karāṭa-* ~ *karāva-*. The same root, probably independently, gave rise to other bird names such as MIr *cerc* ‘brood hen’ (see below). The second word for ‘crow’, **wer-*, is found in Baltic (e.g. Lith *várna*), Slavic (e.g. Rus *voróna*), and Tocharian (Toch B *wrauña*). Almost the ultimate in onomatopoeia is the name for the ‘cuckoo’, **kukū-*, attested in Celtic (e.g. OIr *cūach*), Italic (e.g. Lat *cucūlus*), Germanic (e.g. NE *cuckoo*), Baltic (e.g. Lith *kukūoti* ‘to cuckoo’), Slavic (e.g. Rus *kukúša*), Grk *kókkuks*, Arm *k(u)ku*, and Indo-Iranian (e.g. NPers *kuku*, Skt *kokilá-*). Similar words are found in other language families, e.g. Akkadian *kugu* and Turkish *guguk*.

There are two words for ‘duck’. The first, **h₃h₃ti-*, is found in Italic (Lat *anas*), Germanic (e.g. OE *ened*), Baltic (e.g. Lith *ántis*), Slavic (e.g. Rus *útka*), Grk *nēssa*, Iranian (e.g. Oss *acc* ‘wild duck’), and Indic (Skt *āti-*); the second, **pad-*, is less certain as it is attested primarily in modern languages, e.g. Spanish *pato* and SC *patka* are the sole representatives of Italic and Slavic respectively; it is also known from Arm *bad* ‘drake’ and NPers *ba*. Similar sounding names occur in Arabic and Georgian (e.g. *batti*) and this similarity suggests onomatopoeia. In other words, Indo-European ducks probably did not say ‘quack, quack’ but rather ‘pad, pad’.

The name of the ‘eagle’, **h₃or-*, is preserved with the meaning ‘eagle’ in five groups, i.e. Celtic (e.g. OIr *irar*), Germanic (e.g. NE *erne*), Baltic (e.g. Lith *erėlis*), Slavic (e.g. Rus *orėl*), and Anatolian (Hit *hāras*); derivatives are also found in Grk *órnis* ‘bird’, and Arm *urur* ‘kite’, *oror* ‘gull’, and *ori* ‘raven’. The word does survive in Modern English but citation of *erne* would send most readers to an English dictionary.

The precise meaning of **teter-* is uncertain but the range of meanings suggests a large gamebird such as the capercaillie, pheasant, or partridge; it is attested in Celtic (MIr *tethra* ‘hooded crow’), Germanic (e.g. ON *þiðurr* ‘capercaillie’), Baltic (e.g. Lith *tetervà* ‘capercaillie’), Slavic (e.g. OCS *tetrěvĭ* ‘pheasant’, Rus *teterev* ‘capercaillie’), Grk *tetráōn* ‘capercaillie’, Iranian (NPers *tadhary* ‘pheasant’), and Indic (Skt *tittirá-* ‘partridge’). The ‘goose’, **ġhan-s-*, is well attested and is found in Celtic (e.g. OIr *gēis*), Italic (e.g. Lat *ānser*), Germanic (e.g. NE *goose*), Baltic (e.g. Lith *žąsis*), Slavic (e.g. Rus *gusĭ*), Grk *khén*, and Indic (Skt *hamsa-* ‘waterfowl’); some have derived it from the verbal root **ġhan-* ‘gape, yawn’. The ‘hen’, **kerk-*, which appears in Europe c. 3000 BC, is found in Celtic (MIr *cerc* ‘brood hen’), dialectal Grk *kérkos* ‘rooster’,

Iranian (Av *kahrka*- ‘hen’), Indic (Skt *kṛkara*- ‘a kind of partridge’, *kṛkavāku*- ‘rooster’), and Tocharian (Toch B *krañko* ‘chicken’); obvious is the suggestion that the name of the bird may be onomatopoeic (compare NE *chuck*) and so its reconstruction is not entirely certain. Unquestionably onomatopoeic is the name of the ‘hoopoe’, **h₁epop*, which is found in Italic (Lat *upupa*), Germanic (e.g. NE *hoopoe*), Baltic (e.g. Lith *pupūtis*), Slavic (e.g. Pol *hupek*), Grk *épops*, Arm *popup*, and Iranian (NPers *pūpū*). In Aristophanes’ *Birds*, the hoopoe cries ‘*epopoi popopopopopopoi*’. The name of the ‘jay’, **kiĕ-(y)eh_a-*, is found in Italic (only in Italian *cissa*), Germanic (e.g. OE *hig(e)ra*), Grk *kíssa*, and Skt *cisa*- ‘roller’. The names of the ‘owl’ are expectedly onomatopoeic, i.e. **h₂/zuh₁e/olo-* in NE *owl*, NHG *Eule* ‘owl’, and Hit *huwalas* ‘owl’; **b(e)u-* in Italic (Lat *būbō*), Slavic (Bulg *buk*), Grk *búas*, Arm *bu* ~ *bueč*, and Iranian (NPers *būm*) and **uh₁-* (Italic, i.e. Lat *uluc(c)us*, and Indic, i.e. Skt *úlūka-*). ‘Sparrow’ is probably too specific for **sper-* which means ‘sparrow’ only in Germanic but ‘crow’ in Celtic (Corn *frau*), ‘starling’ in dialectal Grk *sparásion*, and some form of unidentified bird in Tocharian (e.g. Toch A *špār*). The name of the ‘stork’, **(s)ter-*, would be confined to Germanic (e.g. NE *stork*) if it were not for the cognate form *tarlā* which occurs in Hittite; under one proposal there may also be cognates in Greek and Indic. Finally, **(s)p(e)iko/eh_a-* means ‘woodpecker’ in Italic (Lat *pīcus* ‘woodpecker’ but *pīca* ‘jay; magpie’) and Germanic (e.g. OHG *speh* ‘woodpecker’) but ‘Indian cuckoo’ in Indic (Skt *piká-*).

There are about a dozen regional names of birds. From the North-West we have **h_aemes-l-* ‘blackbird’ (e.g. NWels *mwylach*, Lat *merula*, OE *ōsle* [> NE *ousel*]); **kap-* ‘hawk, falcon’ (e.g. NE *hawk*, Rus *kóbec* ‘[type of] falcon’) derived from **kap-* ‘seize’; **kār_hxkeh_a-* ‘magpie’ which is found only in Baltic (e.g. Lith *šárka*) and Slavic (e.g. Rus *soróka*); the onomatopoeic **kǎu-* ‘howl; owl’ (NWels *cuan*, OHG *hūwo*); **storos* ‘starling’ (Lat *sturnus*, NE *starling*, OPrus *starnite* ‘gull’); and **trosdos* ‘thrush’ (e.g. Lat *turdus*, NE *thrush*, Lith *strāzdas*, Rus *drozd*, and perhaps Grk *stroūthos*). From the West Central area we have **bhel-* ‘coot’ (e.g. Lat *fulica*, OHG *belihha*) which has a Greek cognate as well (*phalaris*); **(s)pingo-* ‘finch’ (NE *finch*, Grk *spíggos* ‘finch’) but perhaps Proto-Indo-European if one accepts Skt *phingaka* ‘shrike’ as cognate; **h₁or_hxdeh_a-* which is some form of waterbird such as the ‘heron’ (e.g. Lat *ardea* ‘heron’, ON *arta* ‘teal’, SC *róda* ‘stork’, Grk *(e)rōdiós* ‘heron; stork’); and **h₁el-* ‘waterbird, swan’ (e.g. OIr *ela*, Lat *olor*) which has a questionable Greek cognate indicating the ‘reed warbler’ (*eléā*); **kopso-* ‘blackbird’ is confined to Slavic (e.g. OCS *kosū*) and Grk *kópsikhos*. **g^wltur-* ‘vulture’ is found in Lat *voltur* ~ *volturis* ~ *volturus*, and Greek *blosur-ōpis* ‘vulture-eyed’. A Greek-Armenian-Indo-Iranian isogloss is found in **k̑eino-* ‘bird of prey, kite?’ (Grk *iktīnos*, Arm *c’in*, Av *saēna-* ‘eagle’, Skt *śyená-* ‘eagle’) while the name of the ‘quail’, **wortok^w-*, is a Greek-Indic isogloss (Grk *órtuks*, Skt *vartaka-*).

9.4 Fish, Reptiles, and Amphibians

The reconstructed vocabulary pertaining to fish in Proto-Indo-European is quite small, and even when words are reconstructable, the precise meaning may be quite ambiguous. It is an area of the Indo-European vocabulary where Asian cognates are so few that one cannot even reconstruct a generic word for ‘fish’ that meets our full requirements of Proto-Indo-European. The general word for ‘fish’ with the widest potential distribution is **pik̑skos* ‘fish’ with cognates in Celtic (e.g. OIr *tāsc*), Lat *piscis*, Germanic (e.g. NE *fish*), and Skt *picchā-* ‘calf of the leg’. The Indic cognate is semantically far removed but is commonly justified on the widespread folk association of the calf of the leg with the belly of a fish filled with roe. The word is generally derived from **pik̑-skō-* ‘spotted’ or the like, a derivative of **peik̑-* ‘paint, mark’, and the original referent is taken to be the ‘trout’ which, given its ubiquity across Eurasia, developed into the more general meaning of ‘fish’. Other cognate sets include a word for ‘carp’, **k̑oph_aelos*, which is attested in Baltic and Old Indic only (e.g. Lith *šāpalas* ‘chub’, Latv *sapalis* ‘chub, Dvina-carp’, Skt *śaphara-* ‘carp’). A PIE **ghérsos* is attested in Germanic (e.g. Norw *gjørs* ‘pikeperch’), Slavic (e.g. Rus *zérekh* ‘asp’), and possibly Indic with a wide range of meanings (e.g. Skt *jhaśá-* ‘a kind of large fish’). Equally problematic is *?*k̑ónkus* which depends on comparing the ON *hār* ‘shark’ with an Indic word referring to some kind of aquatic animal or fish (Skt *śankú-*). Far more secure is **lóks* which is attested in Germanic (e.g. OE *leax* ‘salmon’, OHG *lahs* ‘salmon’ [> NE *lox*]), Baltic (e.g. Lith *lāšis* ‘salmon’), Slavic (e.g. Rus *losósi*, ‘salmon’), Arm *losdi* ‘salmon trout’, Iranian (Oss *lasæg* ‘salmon trout’), and Tocharian (e.g. Toch B *laks*, where it has become the general word for ‘fish’), although its specific referent, be it the Atlantic salmon (*Salmo salar*) or the salmon trout (*Salmo trutta*), has been the subject of major debate, similar in many ways to the beech-argument summarized in Chapter 10. Proponents of the first meaning employed the reconstructed word for ‘salmon’ to set the Indo-European homeland adjacent

Table 9.3. *Fish, reptiles, amphibians*

<i>*pik̑skos</i>	‘trout, fish’	Lat <i>piscis</i> , NE <i>fish</i> , Skt <i>picchā-</i>
<i>*k̑oph_aelos</i>	‘carp’	Skt <i>śaphara-</i>
<i>*ghérsos</i>	‘asp’ or ‘pikeperch’?	
<i>?*k̑ónkus</i>	‘a kind of fish’	Skt <i>śankú-</i>
<i>*lóks</i>	‘salmonid, salmon(trout)’	cf. NE <i>lox</i>
<i>*(s)k̑^wálos</i>	‘sheatfish, wels’	Lat <i>squalus</i> , NE <i>whale</i>
<i>*h₁óg^whis</i>	‘snake’	Grk <i>ékhis</i> , <i>óphis</i> , Skt <i>áhi-</i>

to the Baltic Sea while those preferring the anadromous types of salmon trout took it to indicate the Black or Caspian seas. Attempts to also include a range of Indic cognates (e.g. *lākṣā-* ‘lac’, if < *‘reddish’ < *‘salmon-coloured’) have also been widely discussed. The precise meaning of *(s)k^wálos, reconstructed on the basis of Italic (Lat *squalus* ‘± shark’), Germanic (e.g. NE *whale*), Baltic (OPrus *skalis* ‘sheatfish’), Greek (dialectal Grk *áspalos* ‘fish’), and Iranian (e.g. Av *kara-* ‘a kind of fish’), is not entirely secure, but the large ‘sheatfish’ whose meaning is attested in Middle High German and Baltic is far more probable than ‘whale’; the Greek and Iranian cognates simply refer to some kind of fish.

The only reptile securely reconstructed is the ‘snake’, *h₁óg^whis, which is retained in Celtic (e.g. NWels *euod* ‘sheepworm’), Germanic (e.g. OHG *egala* ‘leech’), Greek (e.g. *ékhis* ‘viper’, *óphis* ‘snake’), Arm *iž* ‘snake, viper’, Iranian (e.g. Av *aži-* ‘snake’), Indic (Skt *áhi-* ‘snake’), and probably Tocharian (Toch B *auk*).

There are some regional cognate sets for some of the fish, reptile, and amphibian names. From the North-West we have: *krek- ‘fish eggs, frogspawn’ in Germanic (e.g. ON *hrogn* ‘roe’), Baltic (e.g. Lith *kurkulaĩ* ‘frogspawn’), and Slavic (e.g. Rus *krjak* ‘frogspawn’); the NE *roe* is a loanword from Old Norse which does exhibit the cognate form); ?* h_aékú- ‘perch’ is found in Germanic (e.g. ON *qgr* ‘sea-bass’) and Baltic (e.g. Lith *ešerỹs* ~ *ašerỹs* ‘perch’) but, as the word derives from *h_aék- ‘sharp’ (the perch has spiny fins), it may have been independently created in the two groups. The same root underlies *h_aéke(tro)- ‘sturgeon’ (e.g. Lat *acipēnses*, Lith *eškétras*, Rus *osětr*); *st_ǵ(h_x)yon- means ‘sturgeon’ in Germanic (e.g. OE *styri(g)a*) but refers to the ‘salmon’ in Celtic (Lat *sariō*, borrowed from Gaulish). An alternative name for the ‘snake’, *néh₁tr- ~ *nh₁tr- ‘snake’, is found in OIr *nathir* [gen. *nathrach*] ‘snake’ (which indicates retention of a name that transcended Irish geography although not necessarily experience as snakes are native to neighbouring Britain), Lat *natrix* ‘watersnake; penis’, Goth *nadrs* ‘snake, viper’, OE *næddre* ‘adder’ [ME *a nadder* > NE *an adder*]; a Western innovation meaning ‘the twister’ from *sneh₁- ‘twist, turn’.

In the West Central region we have a generic word for ‘fish’, *dhǵhuh_x-, in Baltic (e.g. Lith *žūvis*), Grk *ikhthūs*, and Arm *jukn* which exhibits an archaic shape that suggests it may have been the word for ‘fish’ in Proto-Indo-European but was replaced by other words on the extremities of the Indo-European world. The root *mǵh_x- (e.g. NE *minnow*, Rus *menĩ* ‘burbot’, Grk *mainē* ‘*Maena vulgaris*’) appears to have meant something like ‘minnow; small fish’. The word for ‘eel’, *h_xVnghel-, is reasonably widely attested with cognates in Italic (Lat *anguilla*), Baltic (e.g. Lith *ungurỹs*), Slavic (e.g. OCS *qgulja*), and Grk *égkhehus*. A second word for the ‘sheatfish’, *kámōs, is found in Baltic (e.g. Lith

šāmas), Slavic (Rus *som*), and Grk *kamasēnes* [pl.] ‘a kind of fish’. The distribution of a word for the ‘tench’, **(s)lei-*, is built on the root of the same shape meaning ‘slimy’ and is well attested in Baltic (e.g. Lith *lŷnis*) and Slavic (e.g. Rus *linŷ*), possibly in Grk *lineús* ‘blemy’; Germanic uses the same root to form the word for ‘tench, mullet’ (e.g. OE *slŷw*) but this may be an independent creation. The name of the ‘frog’, **worh_xd-i/o-*, is found in Baltic (Latv *varde*) and Arm *gort*; a similar word (**worh_xdo-*) gives us the words for ‘wart’ in Germanic (e.g. NE *wart*), Baltic (e.g. Latv *ap-viŷde* ‘abscess’), Slavic (e.g. Rus *vėred* ‘abscess’), and Iranian (e.g. NPers *balū* ‘wart’) which suggests that the association between warts and frogs is quite old. Another regional name for ‘snake’, i.e. **h_aėng^whis*, is found in Celtic (OIr *esc-ung* ‘watersnake’), Italic (Lat *anguis*), Germanic (OHG *unc* ‘snake’), Baltic (e.g. Lith *angis* ‘snake’), Slavic (Rus *uŷ* ‘snake’), Illyr *ábeis* ‘snakes’, and Arm *awj* ‘snake’ while **ghėluh_xs* ‘tortoise’ is found in Slavic (e.g. OCS *žely*) and Grk *khėlus*. If we were able securely to reconstruct the tortoise to Proto-Indo-European, we would have another marker for the Proto-Indo-European homeland, in that the tortoise is not found further north than southern Scandinavia and central Russia. However, there are abundant reasons otherwise for not assuming a far northern homeland for the Proto-Indo-Europeans and thus the reconstructibility of the tortoise does not tell us much. Finally, playing loose with our strictly zoological classification, we can note that **dyk-* ‘dragon’ is attested in Celtic (MIR *muirdris* ‘sea-monster’) and Grk *drákōn* ‘dragon’ (whence, via Latin, NE *dragon*); it derives from the verbal root **derk-* ‘see’ as the dragon fixes its opponent with its baleful gaze.

9.5 Insects, Worms, and Shellfish

The reconstructable names of IE insects are largely a list of nuisances rather than an indication of economic importance. The nuisance factor suggests a certain emotional valence associated with a number of the insects which may well account for many of the phonologically irregular outcomes and metaphorical shifts to other referents. For example, there is no single stable word for ‘ant’ but rather three different (and clearly related) forms: **morwi-* supplies Celtic (e.g. OIr *moirb*), Slavic (e.g. OCS *mravi*), and Iranian (Av *maoirī*); **morm-* underlies the forms in Lat *formīca* and Grk *múrmos*; **mouro-* gives us the Germanic (ON *maurr*); while even more distorted is **worm-* which gives us an alternate Greek form *hórmikas*, Skt *valmīka-*, and Toch B *warne*. Despite the variety of forms, all are agreed in indicating the ‘ant’. There has also been considerable change in the articulation of **plus-* ‘flea’. The Latin word, for example, requires metathesis from **plusek-* to **puslek-* to achieve the historical

Table 9.4. *Insects, shellfish, etc.*

* <i>morwi-</i> ~ * <i>morm-</i> ~	‘ant’	Lat <i>formīca</i> , Grk <i>múrmos</i> , Skt <i>valmīka-</i>
* <i>mouro-</i>		
* <i>plus-</i>	‘flea’	Lat <i>pūlex</i> , ?Grk <i>psúlla</i> , NE <i>flea</i> , Skt <i>plúsi-</i>
* <i>móko-</i>	‘gnat, stinging insect’	Skt <i>maśaka-</i>
* <i>ġelu-</i>	‘leech’	Skt <i>jalūkā-</i>
* <i>lu-</i> (* <i>lus-</i>)	‘louse’	NE <i>louse</i> , Skt <i>yūkā</i>
* <i>rik-</i>	‘nit, tick’	Lat <i>ricinus</i> , Skt <i>likṣā</i>
* <i>h_{2/3}wobhséh_{a-}</i>	‘wasp’	Lat <i>vespa</i> , NE <i>wasp</i>
* <i>k^wṛmis</i>	‘worm, insect’	Skt <i>kṛmi-</i>
* <i>mat-</i>	‘± worm, maggot, insect’	NE <i>moth</i> , Skt <i>matkuṇa-</i>
* <i>kṃh_aros</i>	‘crayfish’	Grk <i>kámaros</i>
* <i>kark-</i>	‘crab’	Lat <i>cancer</i> , Grk <i>karkinos</i> , Skt <i>karkaṭa-</i>
* <i>ḥonkh_aos</i>	‘mussel (-shell) etc’	Grk <i>kóghkos</i> , Skt <i>śankā-</i>

form of **pūlek*; and the possible Greek cognate would seem to require a development **plusy(e)h_{a-}* > **psuly(e)h_{a-}* > *psúlla*. Baltic and Slavic go one further (e.g. Lith *blusà*, OCS *blūcha*) and require **blusyeh_{a-}*. The precise designation of the **móko-* eludes us although all cognates are agreed in using this word to designate some stinging insect. Lith *māšalas* and Skt *maśaka-* can both mean ‘gnat’ (the Sanskrit word can also refer to the mosquito) but MPers *makas* refers to the ‘fly’ and Latv *masalas* to the ‘horsefly’. Again we find dialectal variation in a by-form without a palatal, i.e. **moko-* which gives Lith *mākatas* ‘gnat’ and Skt *mākṣ-* ‘fly’. An Indo-Iranian form was borrowed into Finno-Ugric to provide the name for the ‘bee’, e.g. Hungarian *méh* ‘bee’. A word for the ‘leech’, **ġelu-*, depends on a Celtic-Indo-Iranian cognate set, e.g. OIr *gil* and Skt *jalūkā-*, both ‘leech’, which apparently derives from a verbal root **ġel-* ‘swallow’. The word for ‘louse’, *lu-*, has seen massive reshaping with more expected outcomes from Celtic (NWels *llau*) and Germanic forms such as NE *louse* but dialectal forms such as Lith *vievesa*, Rus *vošī*, and Skt *yūkā*. The young of the louse, the ‘nit’ (**rik-*), is reconstructed on the basis of an Italic-Indo-Iranian set, e.g. Lat *ricinus*, Skt *likṣā*. Well attested is the **h_{2/3}wobhseh_{a-}* ‘wasp’ with cognates in Celtic (e.g. MWels *gw(y)chi* ‘drones’), Italic (Lat *vespa*), Baltic (e.g. OPrus *wobse*), Slav (e.g. OCS *osa*), and Iranian (e.g. MPers *vaβz-*); the noun derives from the verbal root **h_{2/3}webh-* ‘weave’, i.e. one who weaves a wasp nest. The PIE **k^wṛmis* is perhaps best translated as a ‘wug’, i.e. a category that comprises both worms and bugs. It has a ‘worm’ meaning in many of the cognates, e.g. Celtic (OIr *cruim*), Baltic (Lith *kirmis*), Slavic (OCS *črīvī*), Alb

krimb, and Indo-Iranian (e.g. Skt *kṛmi-*) but it can also designate anything from a ‘mite’ (OPrus *girmis*) to a ‘dragon’ (Lith *kirmis*). The PIE **mat-* also has a wide range of meanings and yields both OE *maða* ‘worm, maggot’ and OE *moþþe* (> NE *moth*) as well as Arm *mat’il* ‘louse’ and Av *maðaxa-* ‘grasshopper’.

The **kṃh_aros* is reflected with absolute phonological regularity in both Grk *kámaros* and ON *humarr*. In both languages it means ‘lobster’ but such a meaning cannot be correct for Proto-Indo-European, almost no matter where it was originally spoken. The only reasonable hypothesis is that the word meant ‘crayfish’ in Proto-Indo-European, and in both Germanic and Greek, as these groups adopted a maritime orientation, the word was transferred to the larger, and more important, lobster. A reconstructed **kark-* ‘crab’ is based on Lat *cancer* (< **karkro-*?), Grk *karkínos*, and Skt *karkaṭa-* (< **karkṛto-*) and *karkī-* ‘cancer (as a sign of the zodiac)’. Another possible crustacean is the **kṃkh_aos* ‘mussel’ and any related shellfish. The main cognate set is Grk *kógkhos* ‘mussel(shell)’ and Skt *śaṅká-* ‘(conch)shell’ (with Latv *sence* ‘mussel’ as a derived form).

The North-West offers **bhi-k^wó-* ‘bee, stinging insect’ on the basis of cognates in Celtic (e.g. OIr *bech*), Germanic (e.g. NE *bee*), and Slavic (e.g. OCS *bčela*) and, with a different suffix in **-tih_a-* we have Baltic cognates such as Lith *bītė*; the underlying etymology is **bhei(h_x)-* ‘strike, attack’. We also have a word associated with the product of the ‘bee’, **wos(h_x)-ko-* ‘wax’ (NE *wax*, Lith *vāškas* ‘wax’, OCS *voskū* ‘wax’). For the ‘butterfly’ we have **pelpel-* with related forms in Lat *pāpiliō* and Germanic (e.g. OE *fīfalde*) that have been clearly altered. Etymologically transparent is **kṛh_asro-(h_x)on-* ‘hornet’ from **kṛh₂s-* ‘horn’ with cognates in Lat *crābrō*, Germanic (NDutch *horzel*), Baltic (e.g. Lith *širšė*), and Slavic (e.g. OCS *sīrsenī*), all ‘hornet’. Finally, there is **webhel-* ~ **wobhel-* ‘weevil, beetle’ seen in Germanic (e.g. NE *weevil*), Baltic (e.g. Lith *vābalas*), and Slavic (Rus *veblica* ‘(intestinal) worm’). The West Central area offers a range of insect names: there are several words for the ‘drone’ such as the clearly onomatopoeic **dhren-* ‘drone’ (< ‘buzz’) found in Germanic (e.g. NE *drone*, Grk *thrónaks*) and **kṃh_{xp}-h_a-* ‘drone’ which is meagrely attested in OHG *humbal* and Grk *kēphén*; **mus/h_x-* ‘fly; gnat, midge, mosquito’ with cognates in Italic (Lat *musca*), Baltic (e.g. Lith *muša*), Slavic (e.g. OCS *mšiča*), Grk *muía*, and Arm *mun*; **kóris* ‘± biting insect’ where the root **(s)ker-* ‘cut’ is believed to underlie OCS *korī* ‘moth’ and Grk *kóris* ‘bed-bug’; **h₁empis* ‘gnat, stinging insect’ which is debatedly attested in OE *yambe* ‘swarm of bees’ and a possible cognate Grk *empis* ‘gnat’; **g^welōn* ‘insect’s stinger’ found in Baltic (e.g. Lith *geluō* ‘stinger’) and Grk *déllithes* ‘wasps’; **k(ō)nid-* ‘nit, louse egg’ which is well attested with cognates in Celtic (e.g. OIr *sned* ‘nit’), Germanic

(NE *nit*), Baltic (e.g. Lith *glinda*), Slavic (Rus *gnída*), Alb *thërije*, Grk *konís*, and Arm *anic*; **h_xorki-* ‘tick’ with cognates in Baltic (e.g. Lith *érkė*), and Arm *ork’iwn*; **diġ(h)-* ‘tick’ found in Celtic (MÍr *dega* ‘stag beetle’), Germanic (e.g. OE *ticia*), and Arm *tiz*; **sleimak-* ‘snail, slug’ from a root **(s)lei-* ‘be slimy’ which gives Rus *slimák* ‘snail’ and Grk *leímaks* ‘slug’; and **wǝrmis* ‘worm, insect’ which overlaps phonologically with one of the ‘ant’ words above but also yields Lat *vermis*, NE *worm*, Lith *vařmas* ‘mosquito’, OCS *vermije* ‘grasshoppers’, and Grk *rhómoks* ‘woodworm’. Finally, there are several words restricted to the Central region: **melítih_o-* ‘honey-bee’ where one of the words for honey, **mélit*, provides the basis for Alb *bletë* and Grk *mélissa*, both ‘honey-bee’; **h_xorgi-* ‘nit’, a regional variant of **h_xorki-* which is seen in Alb *ergjëz* and Arm *orjil*; and **demelis* ‘worm’ or whatever will cover the proto-meaning of Alb *dhemjë* ‘larva, caterpillar, maggot’ and Grk *demeléas* ‘leeches’.

9.6 Indo-European Fauna

The roster of animal names reconstructed to Proto-Indo-European is more extensive than that for plants and we can ascribe about seventy-five names to various animal species. This roster does not come anywhere close, however, to the numbers encountered in the lexicons of traditional societies. Brent Berlin examined a sample of seventeen languages which yielded an average of 435 names of animals per language. Be that as it may, Proto-Uralic also has a sizeable number with about sixty names altogether. It is instructive then to compare the structure of the two reconstructed lexicons in terms of the major orders of animals identified (excluding general names) (Table 9.5).

The differences between the two reconstructed lexicons derive primarily from the difference in the respective economies. The Proto-Indo-Europeans possessed a Neolithic economy with extensive references to domestic livestock

Table 9.5. *Animal names in Proto-Indo-European and Uralic*

	PIE	%	URALIC	%
Mammals	42	56	15	25
Birds	17	23	20	33
Fish	6	8	9	15
Reptiles/amphibians	1	1	2	3
Insects etc.	9	12	14	22
Total	75		60	

(cattle, sheep, goat, pig; possibly horse) while the Proto-Uralics were primarily hunter-gatherer-fishers. It is natural then that the Proto-Uralic vocabulary would reflect these differences with a limited number of mammals (four words for reindeer, marten, hare, fox, squirrel, etc.), and a more extensive vocabulary pertaining to birds (about a third of the words refer to some form of duck) and fish.

The designation of animals has been the focus of taxonomic studies and Cecil Brown has proposed a stadial sequence of expected animal names. Stage 1 lacks any 'life form' term (or word naming a large general category of living beings such as 'mammal', 'fish', etc.) while stages 2 to 4 see the addition of 'fish', 'bird', and 'snake' (in any order) and stages 5 and 6 see the introduction of a specialized term for 'mammal' and 'wug'. We have already used this term to define PIE **k^wrmis* as an animal that comprises both worms and bugs (it might be noted that *insect* did not appear in English until after 1600 and from 1650 it defined a 'wug'). Earl Anderson suggests that Proto-Indo-European was a stage 4 language where it lexicalized terms for 'bird' (**h_aewei-*), fish (**dhǵhuh_x-*, **pikskōs*), and 'snake' (**h₁óg^whis*) and had a covert category, i.e. one without a linguistic label, for 'mammal' whose existence is predicated by the fact that Proto-Indo-European made a further (Level Ia) distinction between 'wild animal' (**ǵhwēr*) and 'domestic animal' (**péku*). In some instances we may be in doubt as to whether the word had a generic or more specific meaning. For example, NE *deer*, which today specifies a cervid, derives from OE *dēor* which also covered the meaning 'wild animal' (cf. the cognate NHG *Tier* 'animal'). Multiple meanings or polysemy have been widely observed in animal taxonomies where the name of a focus animal may serve at both the species and a much higher level. That **pikskōs* may have originally designated the 'trout' and was then abstracted to 'fish' in general is a possible example. Similarly PIE **lóks* 'salmon trout' becomes Toch B *laks* 'fish'.

In their major study of Indo-European culture, Gamkrelidze and Ivanov proposed a hierarchical classification of plant and animal life forms in Proto-Indo-European that makes the distinction seen above between 'wild' (**ǵhwēr*) and 'domestic animal' (**péku*). The wild animals are then divided into three classes depending on mythic location, i.e. an Upper World (birds), Middle World (beasts), and Lower World (vermin, snakes, fish). The domestic animals (which includes humans) are distinguished into rational and speaking humans (with their own subclasses) and quadrupeds. The latter are distinguished as those which are ritually close to humans and which may then be divided into those that are horned (cattle, ovicaprids) and not-horned (horse, donkey); the ritually distant animals are the dog, pig, and cat. Anderson regards such a system as too complex in comparison with those evident throughout the world and finds it unusual for any system to classify humans (and gods)

along with animals. On the other hand, it does encompass a series of oppositions or polarities that may have formed either covert or lexicalized slots in Proto-Indo-European, e.g. **kérh₂s* and related words for ‘horn’ vs. **kém-* ‘hornless’

As for the wild mammalian fauna, our ability to reconstruct words hardly recovers all the animals likely to have been distinguished in the proto-language. Certain species are found so widely over Eurasia that they should have been familiar to the Proto-Indo-Europeans irrespective of where their homeland lay. These would include the mole, bat, a variety of rodents (voles, mole rats, etc.), the badger, and the wild cat. The twenty or so bird names (compare this with the fact that the ancient Greeks knew over 500 bird names!) comprise those that were probably economically salient, e.g. ducks and geese, those that were culturally salient, e.g. eagle, and those where onomatopoeia has supported their survival, e.g. hoopoe.

The ten or so fish and shellfish names are extremely meagre (the ancient Greeks knew at least 570 names and even such a damaged resource as Old Prussian can return twenty-five) nor are they particularly revealing of the location of the IE homeland, although names such as ‘salmon’ and ‘eel’ have been employed to do just that. The salmon or ‘Lachsargument’ as it is known in German was, along with the beech-argument (see Chapter 10), one of the pivots of a north European homeland for the Indo-Europeans under the presumption that PIE **lóks* indicated specifically the Atlantic salmon (*Salmo salar*) that frequented the waters of the Baltic and North Atlantic. More recent opinion has suggested that **lóks* simply indicated a salmonid for which the salmon trout (*Salmo trutta*) was the more likely original referent and that it was later extended to include the Atlantic salmon by the ancestors of the Germans, Balts, and Slavs. Salmon trout are much more widely found across Eurasia than the Atlantic salmon.

The extensive vocabulary concerning domestic animals is pivotal in establishing, along with the words for cereal agriculture, that the Proto-Indo-Europeans possessed a mixed economy based on livestock and arable agriculture, i.e. had achieved at least a Neolithic mode of subsistence. The presence of two words for what was probably the domestic pig, i.e. **sūs* and **pórkos*, suggests that the economy was not, at least originally, that of pastoral nomads, as swine are notoriously difficult to herd over long distances. On the other hand, within any culture, and especially an area as large as that probably inhabited by the earliest Indo-Europeans, there might have been a wide range of economic regimes that also included various degrees of mobility.

In addition to the pig, ovicaprids, the sheep and goats, are also of special interest because these were not native (in their wild state) to much of the later Indo-European world prior to the expansion of the Neolithic economy from

South-West Asia. The route by which sheep spread into Europe certainly included the Balkans and probably also the Caucasus (to the steppelands); much less likely, although sometimes suggested, was the eastern Caspian steppe (to account for early Neolithic sheep in the southern Urals). Terms for sheep such as **h₂ówis* (and also ‘wool’ as we will see in Chapter 14) are virtually ubiquitous across the IE world and that ubiquity can only be explained with reference to the spread of a language whose speakers possessed stock-raising (and wool-procuring) skills.

Of all the (potentially) domestic animals, the main focus of debate has often been the status of **h₁ék^wos* ‘horse’. That some form of horse can be ascribed to the earliest Proto-Indo-Europeans (and with Anatolian cognates in Hieroglyphic Luvian *azu(wa)-* and Lycian *esbe-* we may include the concept of Indo-Hittite) seems secure. Also secure is the importance of the horse in the cultures of the earliest IE groups and their mythologies and rituals. What is not secure, however, is whether we can reconstruct **h₁ék^wos* as ‘domestic horse’ or simply ‘horse’ and, in the event that we can reconstruct the proto-meaning as ‘domestic horse’, whether we can locate in space and time the location of the earliest domestic horses. The linguistic evidence for ‘domestic horse’ is not strong (nor could it be since there is no absolutely clear linguistic marker of a domestic animal) and relies primarily on the contrast between the feminine form, also of PIE date, which employs an **-eh_a-* suffix (i.e. **h₁ék^weh_a-* ‘mare’) which stands in opposition, some argue, to the feminine of a more certain wild animal, the ‘she-wolf’ (**wl^wk^wth_a-*) with an **-ih_a-* suffix. All other arguments rest on non-linguistic matters such as the presumed location of the homeland, the nature of its economy, and the apparent ‘depth’ at which the concept of a domestic horse appears to be embedded in Indo-European culture, e.g. in rituals, personal names. In terms of the prehistoric exploitation of the horse, the major centre would appear to be across the steppe and forest-steppe from the Dnieper east to the Ural and somewhat beyond, and this is generally the region where most would place the earliest domestication of the horse in the fifth or fourth millennium BC (there are heated arguments as to precisely when and what constitutes clear evidence). Remains of presumably wild horses are known outside the steppelands in Iberia, Atlantic, and northern Europe to the Danube; some horse remains have also been recovered from Early Neolithic Anatolia. There is a general absence of horse remains until the Bronze Age in Greece, most of the Balkans, and Italy. The lack of the horse in these regions has been pressed by some to suggest that the Indo-Europeans were hardly likely to have been resident in these areas until the Bronze Age.

Further Reading

Basic coverages of Indo-European fauna can be found in Schrader–Nehring (1917-28), Gamkrelidze and Ivanov (1995), Mallory–Adams (1997). General surveys of livestock can be seen in Benveniste (1949), Diebold (1992), and Blažek (1992). Useful articles on individual species include: bear (Delamarre 1992), beaver (Hamp 1972*b*), cow (Zimmer 1981), deer (Adams 1985*a*, Witczak 1994*a*), dog (Schlerath 1954, Hamp 1980*a*, Melchert 1989), fox (Adrados 1985, Schrijver 1998), horse (Hänsel and Zimmer 1993, Hamp 1990*c*, Bonfante 1996, Huld 2004, Parvulescu 1993*b*; for horse domestication, see Levine 2005), lion (Adams 1984), pig (Benveniste 1973*b*, Hamp 1987*a*), sheep (Hamp 1984*a*, 1987*b*, Lindeman 1990*a*), squirrel (Hamp 1972*c*), wolf (Klimas 1974, McKone 1985, Lehrmann 1987). The IE fauna is discussed archaeologically in Mallory 1982.

The word for ‘bird’ and ‘egg’ is treated in Schindler (1969); other species include the blackbird (Hamp 1982*a*), duck (Hamp 1978), hen (Schlerath 1953), thrush (Hamp 1981*a*), and birds from both an Indo-European and archaeological viewpoint in Mallory (1991).

Literature on the fish includes Adams (1985*b*), Bammesberger (1996), Diebold (1976, 1985), Hamp (1973*a*), Krause (1961), Krogmann (1960), Sadowsky (1973), Seebold (1985), Sevilla Rodriguez (1989), Thieme (1954), and Winter (1982); from an archaeological viewpoint see Mallory (1983).

The ‘bee’ is the subject of Hamp (1971*a*).

For folk taxonomies see Anderson (2003), Berlin (1992), Brown (1984); the count of Greek bird and fish names is based on Thompson (1895, 1947); the Uralic evidence is derived from Häkkinen (2001).