

Wild boar

From Wikipedia, the free encyclopedia

The **wild boar** (*Sus scrofa*), also known as the **wild swine**^[3] or **Eurasian wild pig**,^[4] is a suid native to much of Eurasia, North Africa, and the Greater Sunda Islands. Human intervention has spread its range further, making the species one of the widest-ranging mammals in the world, as well as the most widely spread suiform.^[4] Its wide range, high numbers, and adaptability mean that it is classed as least concern by the IUCN.^[1] The animal probably originated in Southeast Asia during the Early Pleistocene,^[5] and outcompeted other suid species as it spread throughout the Old World.^[6]

As of 1990, up to 16 subspecies are recognised, which are divided into four regional groupings based on skull height and lacrimal bone length.^[2] The species lives in matriarchal societies consisting of interrelated females and their young (both male and female). Fully grown males are usually solitary outside the breeding season.^[7] The grey wolf is the wild boar's main predator throughout most of its range except in the Far East and the Lesser Sunda Islands, where it is replaced by the tiger and Komodo dragon respectively.^{[8][9]} It has a long history of association with humans, having been the ancestor of most domestic pig breeds and a big-game animal for millennia.

Contents

- 1 Terminology
- 2 Taxonomy and evolution
 - 2.1 Subspecies
 - 2.2 Domestication
- 3 Physical description
- 4 Social behaviour and life cycle
- 5 Ecology
 - 5.1 Habitat and sheltering behaviour
 - 5.2 Diet
 - 5.3 Predators
- 6 Range
 - 6.1 Reconstructed range
 - 6.2 Present range
 - 6.3 Status in Britain
 - 6.4 Introduction to North America
- 7 Diseases and parasites
- 8 Relationships with humans
 - 8.1 In culture

Wild boar

Temporal range: Early Pleistocene–Holocene



Male Central European boar (*S. s. scrofa*)

Conservation status



Least Concern (IUCN 3.1)^[1]

Scientific classification

Kingdom:	Animalia
Phylum:	Chordata
<i>Clade</i> :	Synapsida
Class:	Mammalia
Order:	Artiodactyla
Family:	Suidae
Subfamily:	Suinae
Genus:	<i>Sus</i>
Species:	<i>S. scrofa</i>

Binomial name

Sus scrofa

Linnaeus, 1758

- 8.2 As a game animal and food source
- 8.3 Crop and garbage raiding
- 8.4 Attacks on humans
- 9 See also
- 10 Notes
- 11 References
- 12 Bibliography
- 13 Further reading
- 14 External links

Terminology

As true wild boars became extinct in Britain before the development of modern English, the same terms are often used for both true wild boar and pigs, especially large or semiwild ones. The English 'boar' stems from the Old English *bar*, which is thought to be derived from the West Germanic **bairaz*, of unknown origin.^[10] Boar is sometimes used specifically to refer to males, and may also be used to refer to male domesticated pigs, especially breeding males that have not been castrated.

'Sow', the traditional name for a female, again comes from Old English and Germanic; it stems from Proto-Indo-European, and is related to the Latin *sus* and Greek *hus* and more closely to the modern German *Sau*. The young may be called 'piglets'.





The animals' specific name *scrofa* is Latin for 'sow'.^[11] In hunting terminology, boars are given different designations according to their age:^[12]



Reconstructed range of wild boar (green) and introduced populations (blue): Not shown are smaller introduced populations in the Caribbean, New Zealand, sub-Saharan Africa, and elsewhere.^[1]

Synonyms

Species synonymy^[2]

Designation	Age	Image
Squeaker	0–10 months	
Juvenile	10–12 months	
Pig of the sounder	Two years	
Boar of the 4th/5th/6th year	3–5 years	
Old boar	Six years	
Grand old boar	Over seven years	
"Solitary boar"		

Taxonomy and evolution

MtDNA studies indicate that the wild boar originated from islands in Southeast Asia such as Indonesia and the Philippines, and subsequently spread onto mainland Eurasia and North Africa.^[5] The earliest fossil finds of the species come from both Europe and Asia, and date back to the Early Pleistocene.^[13] By the late Villafranchian, *S. scrofa* largely displaced the related *S. strozzi*, a large, possibly swamp-adapted suid ancestral to the modern *S. verrucosus* throughout the Eurasian mainland, restricting it to insular Asia.^[6] Its closest wild relative is the bearded pig of Malacca and surrounding islands.^[3]

Subspecies

As of 2005,^[2] 16 subspecies are recognised, which are divided into four regional groupings:


- Western:** Includes *S. s. scrofa*, *S. s. meridionalis*, *S. s. algira*, *S. s. attila*, *S. s. lybicus*, and *S. s. nigripes*. These subspecies are typically high-skulled (though *lybicus* and some *scrofa* are low-skulled), with thick










Skull of *Sus strozzi* (Museo di Storia Naturale di Firenze), a Pleistocene suid that was outcompeted by *S. scrofa*



underwool and (excepting *scrofa* and *attila*) poorly developed manes.^[14]


- **Indian:** Includes *S. s. davidi* and *S. s. cristatus*. These subspecies have sparse or absent underwool, with long manes and prominent bands on the snout and mouth. While *S. s. cristatus* is high-skulled, *S. s. davidi* is low-skulled.^[14]
- **Eastern:** Includes *S. s. sibiricus*, *S. s. ussuricus*, *S. s. leucomystax*, *S. s. riukiuanus*, *S. s. taivanus*, and *S. s. moupinensis*. These subspecies are characterised by a whitish streak extending from the corners of the mouth to the lower jaw. With the exception of *S. s. ussuricus*, most are high-skulled. The underwool is thick, except in *S. s. moupinensis*, and the mane is largely absent.^[14]
- **Indonesian:** Represented solely by *S. s. vittatus*, it is characterised by its sparse body hair, lack of underwool, fairly long mane, a broad reddish band extending from the muzzle to the sides of the neck.^[14] It is the most basal of the four groups, having the smallest relative brain size, more primitive dentition and unspecialised cranial structure.^[15]


Subspecies	Image	Trinomial authority	Description	Range	Synonyms
<p>Central European boar <i>S. s. scrofa</i> Nominate subspecies</p>		<p>Linnaeus, 1758</p>	<p>A medium-sized, dark to rusty-brown haired subspecies with long and relatively narrow lacrimal bones^[3]</p>	<p>Northern Spain, northern Italy, France, Germany, Benelux, Croatia, Belarus, Denmark, Sweden, Lithuania, Poland, Czech Republic, Slovakia and possibly Albania</p>	<p><i>anglicus</i> (Reichenbach, 1846), <i>aper</i> (Erxleben, 1777), <i>asiaticus</i> (Sanson, 1878), <i>bavaricus</i> (Reichenbach, 1846), <i>campanogallicus</i> (Reichenbach, 1846), <i>capensis</i> (Reichenbach, 1846), <i>castilianus</i> (Thomas, 1911), <i>celticus</i> (Sanson, 1878), <i>chinensis</i> (Linnaeus, 1758), <i>crispus</i> (Fitzinger, 1858), <i>deliciosus</i> (Reichenbach, 1846), <i>domesticus</i> (Erxleben, 1777), <i>europaeus</i> (Pallas, 1811), <i>fasciatus</i> (von Schreber, 1790), <i>ferox</i> (Moore, 1870), <i>ferus</i> (Gmelin, 1788), <i>gambianus</i> (Gray, 1847), <i>hispidus</i> (von Schreber, 1790), <i>hungaricus</i> (Reichenbach, 1846), <i>ibericus</i> (Sanson, 1878), <i>italicus</i> (Reichenbach, 1846), <i>juticus</i> (Fitzinger, 1858), <i>lusitanicus</i> (Reichenbach, 1846), <i>macrotis</i> (Fitzinger, 1858), <i>monungulus</i> (G. Fischer [von Waldheim], 1814), <i>moravicus</i> (Reichenbach, 1846), <i>nanus</i> (Nehring, 1884), <i>palustris</i> (Rütimeyer, 1862),</p>

					<p><i>pliciceps</i> (Gray, 1862), <i>polonicus</i> (Reichenbach, 1846), <i>sardous</i> (Reichenbach, 1846), <i>scropha</i> (Gray, 1827), <i>sennaarensis</i> (Fitzinger, 1858), <i>sennaarensis</i> (Gray, 1868), <i>sennaariensis</i> (Fitzinger, 1860), <i>setosus</i> (Boddaert, 1785), <i>siamensis</i> (von Schreber, 1790), <i>sinensis</i> (Erxleben, 1777), <i>suevicus</i> (Reichenbach, 1846), <i>syrmienensis</i> (Reichenbach, 1846), <i>turcicus</i> (Reichenbach, 1846), <i>variegatus</i> (Reichenbach, 1846), <i>vulgaris</i> (S. D. W., 1836), <i>wittei</i> (Reichenbach, 1846)</p>
<p>North African boar <i>S. s. algira</i></p>		<p>Loche, 1867</p>	<p>Sometimes considered a junior synonym of <i>S. s. scrofa</i>, but smaller and with proportionally longer tusks^[16]</p>	<p>Tunisia, Algeria and Morocco</p>	<p><i>barbarus</i> (Sclater, 1860) <i>sahariensis</i> (Heim de Balzac, 1937)</p>
<p>Carpathian boar <i>S. s. attila</i></p>		<p>Thomas, 1912</p>	<p>A large-sized subspecies with long lacrimal bones and dark hair, though lighter-coloured than <i>S. s. scrofa</i>^[3]</p>	<p>Romania, Hungary, Ukraine, Balkans, Caucasus, Transcaucasia, Caspian coast, Asia Minor and northern Iran</p>	<p><i>falzeini</i> (Matschie, 1918)</p>
<p>Indian boar <i>S. s. cristatus</i></p>		<p>Wagner, 1839</p>	<p>A long-maned subspecies with a coat that is brindled black unlike <i>S. s.</i></p>	<p>India, Nepal, Burma, western Thailand and Sri Lanka</p>	<p><i>affinis</i> (Gray, 1847), <i>aipomus</i> (Gray, 1868), <i>aipomus</i> (Hodgson, 1842), <i>bengalensis</i> (Blyth, 1860), <i>indicus</i></p>

			<p><i>dauidi</i>,^[17] it is more lightly built than <i>S. s. scrofa</i>. Its head is larger and more pointed than that of <i>S. s. scrofa</i>, and its ears smaller and more pointed. The plane of the forehead is straight, while it is concave in <i>S. s. scrofa</i>.^[18]</p>		<p>(Gray, 1843), <i>isonotus</i> (Gray, 1868), <i>isonotus</i> (Hodgson, 1842), <i>jubatus</i> (Miller, 1906), <i>typicus</i> (Lydekker, 1900), <i>zeylonensis</i> (Blyth, 1851)</p>
<p>Central Asian boar <i>S. s. dauidi</i></p>		Groves, 1981	A small, long-maned and light brown subspecies ^[17]	Pakistan and northwest India to southeastern Iran	
<p>Japanese boar <i>S. s. leucomystax</i></p>		Temminck, 1842	A small, almost maneless, yellowish-brown subspecies ^[17]	All of Japan, save for Hokkaido and the Ryukyu Islands	<p><i>japonica</i> (Nehring, 1885) <i>nipponicus</i> (Heude, 1899)</p>
<p>Anatolian boar <i>S. s. libycus</i></p>		Gray, 1868	A small, pale and almost maneless subspecies ^[17]	Transcaucasia, Turkey, Levant, Israel and former Yugoslavia	<p><i>lybicus</i> (Groves, 1981) <i>mediterraneus</i> (Ulmansky, 1911) <i>reiseri</i> (Bolkay, 1925)</p>
<p>Maremman boar <i>S. s. majori</i></p>		De Beaux and Festa, 1927	Smaller than <i>S. s. scrofa</i> , with a higher and wider skull, since the 1950s, it has crossed extensively with <i>S. s. scrofa</i> , largely due to the two being kept together in meat farms and artificial introductions by hunters of <i>S. s.</i>	Maremma (central Italy)	

			<i>scrofa</i> specimens into <i>S. s. majori</i> habitats. ^[19] Its separation from <i>S. s. scrofa</i> is doubtful. ^[20]		
Mediterranean boar <i>S. s. meridionalis</i>		Forsyth Major, 1882		Andalusia, Corsica and Sardinia	<i>baeticus</i> (Thomas, 1912) <i>sardous</i> (Ströbel, 1882)
Northern Chinese boar <i>S. s. moupinensis</i>		Milne-Edwards, 1871	There are significant variations within this subspecies, and it is possible there actually are several subspecies involved. ^[17]	Coastal China south to Vietnam and west to Sichuan	<i>acrocranius</i> (Heude, 1892), <i>chirodontus</i> (Heude, 1888), <i>chirodonticus</i> (Heude, 1899), <i>collinus</i> (Heude, 1892), <i>curtidens</i> (Heude, 1892), <i>dicrurus</i> (Heude, 1888), <i>flavescens</i> (Heude, 1899), <i>frontosus</i> (Heude, 1892), <i>laticeps</i> (Heude, 1892), <i>leucorhinus</i> (Heude, 1888), <i>melas</i> (Heude, 1892), <i>microdontus</i> (Heude, 1892), <i>oxyodontus</i> (Heude, 1888), <i>paludosus</i> (Heude, 1892), <i>palustris</i> (Heude, 1888), <i>planiceps</i> (Heude, 1892), <i>scrofoides</i> (Heude, 1892), <i>spatharius</i> (Heude, 1892), <i>taininensis</i> (Heude, 1888)
Middle Asian boar <i>S. s. nigripes</i>		Blanford, 1875	A light coloured subspecies with black legs which, though varied in size, it is generally quite	Middle Asia, Kazakhstan, eastern Tien Shan, western Mongolia, Kashgar and	

			large, the lacrimal bones and facial region of the skull are shorter than those of <i>S. s. scrofa</i> and <i>S. s. attila</i> . ^[3]	possibly Afghanistan and southern Iran	
Ryukyu boar <i>S. s. riukiuanus</i>		Kuroda, 1924	A small subspecies ^[17]	Ryukyu Islands	
Trans-baikal boar <i>S. s. sibiricus</i>		Staffe, 1922	The smallest subspecies of the former Soviet region, it has dark brown, almost black hair and a light grey patch extending from the cheeks to the ears. The skull is squarish and the lacrimal bones short. ^[3]	Baikal, Transbaikalia, northern and northeastern Mongolia	<i>raddeanus</i> (Adlerberg, 1930)
Formosan boar <i>S. s. taiwanus</i>		Swinhoe, 1863	A small blackish subspecies ^[17]	Taiwan	
Ussuri boar <i>S. s. ussuricus</i>		Heude, 1888	The largest subspecies, it has usually dark hair and a white band extending from the corners of the mouth to the ears. The lacrimal bones are shortened, but longer than those of <i>S. s. sibiricus</i> . ^[3]	Eastern China, Ussuri and Amur bay	<i>canescens</i> (Heude, 1888), <i>continentalis</i> (Nehring, 1889), <i>coreanus</i> (Heude, 1897), <i>gigas</i> (Heude, 1892), <i>mandchuricus</i> (Heude, 1897), <i>songaricus</i> (Heude, 1897)

<p>Banded pig <i>S. s. vittatus</i></p>		<p>Boie, 1828</p>	<p>A small, short-faced and sparsely furred subspecies with a white band on the muzzle, it might be a separate species, and shows some similarities with some other suid species in Southeast Asia.^[17]</p>	<p>From Peninsular Malaysia, and in Indonesia from Sumatra and Java east to Komodo</p>	<p><i>andersoni</i> (Thomas and Wroughton, 1909), <i>jubatulus</i> (Miller, 1906), <i>milleri</i> (Jentink, 1905), <i>pallidiloris</i> (Mees, 1957), <i>peninsularis</i> (Miller, 1906), <i>rhionis</i> (Miller, 1906), <i>typicus</i> (Heude, 1899)</p>
--	---	-------------------	--	--	--



Domestication

With the exception of domestic pigs in Timor and Papua New Guinea (which appear to be of Sulawesi warty pig stock), the wild boar is the ancestor of most pig breeds.^{[15][22]}

Archaeological evidence suggests that pigs were domesticated from wild boar as early as 13,000–12,700 BC in the Near East in the Tigris

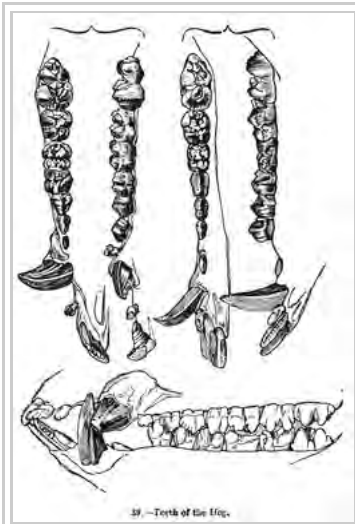
Basin^[23] being managed in the wild in a way similar to the way they are managed by some modern New Guineans.^[24] Remains of pigs have been dated to earlier than 11,400 BC in Cyprus. Those animals must have been introduced from the mainland, which suggests domestication in the adjacent mainland by then.^[25] There was also a separate domestication in China which took place about 8000 years ago.^{[26][27]}

DNA evidence from sub-fossil remains of teeth and jawbones of Neolithic pigs shows that the first domestic pigs in Europe had been brought from the Near East. This stimulated the domestication of local European wild boar resulting in a third domestication event with the Near Eastern genes dying out in European pig stock. Modern domesticated pigs have involved complex exchanges, with European domesticated lines being exported in turn to the ancient Near East.^{[28][29]} Historical records indicate that Asian pigs were introduced into Europe during the 18th and early 19th centuries.^[26] Domestic pigs tend to have much more developed hindquarters than their wild boar ancestors, to the point where 70% of their body weight is concentrated in the posterior, which is the opposite of wild boar, where most of the muscles are concentrated on the head and shoulders.^[30]

Physical description



Male, domestic pig-wild boar cross

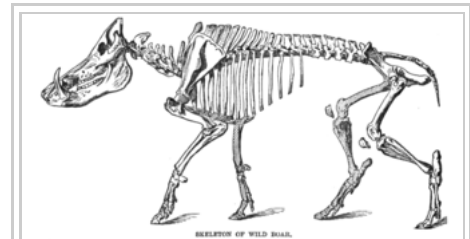


Dentition, as illustrated by Charles Knight

The wild boar is a bulky, massively built suid with short and relatively thin legs. The trunk is short and massive, while the hindquarters are comparatively underdeveloped. The region behind the shoulder blades rises into a hump, and the neck is short and thick, to the point of being nearly immobile. The animal's head is very large, taking up to one third of the body's entire length.^[3] The structure of the head is well suited for digging. The head acts as a plow, while the powerful neck muscles allow the animal to upturn considerable amounts of soil:^[31] it is capable of digging 8–10 cm (3.1–3.9 in) into frozen ground and can upturn rocks weighing 40–50 kg (88–110 lb).^[8] The eyes are small and deep-set, and the ears long and broad. The species has well developed canine teeth, which protrude from the mouths of adult males. The middle hooves are larger and more elongated than the lateral ones, and are capable of quick movements.^[3] The animal can run at a maximum speed of 40 km/h and jump at a height of 140–150 cm (55–59 in).^[8] Sexual dimorphism is very pronounced in the species, with males being typically 5-10% larger and 20-30% heavier than females. Males also sport a mane running down the back, which is particularly apparent during autumn and winter.^[32] The canine teeth are also

much more prominent in males, and grow throughout life. The upper canines are relatively short and grow sideways early in life, though gradually curve upwards. The lower canines are much sharper and longer, with the exposed parts measuring 10–12 cm (3.9–4.7 in) in length. In the breeding period, males develop a coating of subcutaneous tissue, which may be 2–3 cm (0.79–1.18 in) thick, extending from the shoulder blades to the rump, thus protecting vital organs during fights. Males sport a roughly egg-sized sack near the opening of the penis, which collects urine and emits a sharp odour. The purpose of this is not fully understood.^[3]

Adult size and weight is largely determined by environmental factors; boars living in arid areas with little productivity tend to attain smaller sizes than their counterparts inhabiting areas with abundant food and water. In most of Europe, males average 75–100 kg (165–220 lb) in weight, 75–80 cm (30–31 in) in shoulder height and 150 cm (59 in) in body length, whereas females average 60–80 kg (130–180 lb) in weight, 70 cm (28 in) in shoulder height and 140 cm (55 in) in body length. In Europe's Mediterranean regions, males may reach average weights as low as 50 kg (110 lb) and females 45 kg (99 lb), with shoulder heights of 63–65 cm (25–26 in). In the more productive areas of Eastern Europe, males average 110–130 kg (240–290 lb) in weight, 95 cm (37 in) in shoulder height and 160 cm (63 in) in body length, while females weigh 95 kg (209 lb), reach 85–90 cm (33–35 in) in shoulder height and 145 cm (57 in) in body length. In Western and Central Europe, the largest males weigh 200 kg (440 lb) and females 120 kg (260 lb). In Eastern Europe, large males can reach brown bear-like sizes, weighing 270 kg (600 lb) and measuring 110–118 cm (43–46 in) in shoulder height. Some adult males in Ussuriland and Manchuria have been recorded to weigh 300–350 kg (660–770 lb) and measure 125 cm (49 in) in shoulder height. Adults of this size are generally immune from wolf predation.^[33] Such giants are rare in modern times, due to past overhunting preventing animals from attaining their full growth.^[3]



Skeleton, as illustrated by Richard Lydekker.



A European wild boar piglet, painted by Hans Hoffman in 1578. Note the stripes, a characteristic feature of piglets.

The winter coat consists of long, coarse bristles underlaid with short brown downy fur. The length of these bristles varies along the body, with the shortest being around the face and limbs and the longest running along the back. These back bristles form the aforementioned mane prominent in males, and stand erect when the animal is agitated. Colour is highly variable; specimens around Lake Balkhash are very lightly coloured, and can even be white, while some boars from Belarus and Ussuriland can be black. Some subspecies sport a light coloured patch running backwards from the corners of the mouth. Coat colour also varies with age, with piglets having light brown or rusty-brown fur with pale bands extending from the flanks and back.^[3]

The wild boar produces a number of different sounds which are divided into three categories:

- **Contact calls:** Grunting noises which differ in intensity according to the situation.^[34] Adult males are usually silent, while females frequently grunt and piglets whine.^[3] When feeding, boars express their contentment through purring. Studies have shown that piglets imitate the sounds of their mother, thus different litters may have unique vocalisations.^[34]
- **Alarm calls:** Warning cries emitted in response to threats.^[34] When frightened, boars make loud huffing *ukh! ukh!* sounds or emit screeches transcribed as *gu-gu-gu*.^[3]
- **Combat calls:** High-pitched, piercing cries.^[34]

Its sense of smell is very well developed, to the point that the animal is used for drug detection in Germany.^[35] Its hearing is also acute, though its eyesight is comparatively weak,^[3] lacking colour vision^[35] and being unable to recognise a standing human 10–15 metres away.^[8]

Pigs are one of four known mammalian species which possess mutations in the nicotinic acetylcholine receptor that protect against snake venom. Mongooses, honey badgers, hedgehogs, and pigs all have modifications to the receptor pocket which prevents the snake venom α -neurotoxin from binding. These represent four separate, independent mutations.^[36]

Social behaviour and life cycle

Boars are typically social animals, living in female-dominated sounders consisting of barren sows and mothers with young led by an old matriarch. Male boars leave their sounder at the age of 8–15 months, while females either remain with their mothers or establish new territories nearby. Subadult males may live in loosely knit groups, while adult and elderly males tend to be solitary outside the breeding season.^{[7][a]}

The breeding period in most areas lasts from November to January, though most mating only lasts a month and a half. Prior to mating, the males develop their subcutaneous armour, in preparation for confronting rivals. The testicles double in size and the glands secrete a foamy yellowish liquid. Once ready to reproduce, males travel long distances in search of a sounder of sows, eating little on the way. Once a sounder has been located, the male drives off all young animals and persistently chases the sows. At this point, the male fiercely fights potential rivals,^[3] A single male can mate with 5-10 sows.^[8] By the end of the rut, males are often badly mauled and have lost 20% of their body weight,^[3] with bite-induced injuries to the penis being common.^[38] The gestation period varies according to the age of the expecting mother. For first time breeders, it lasts 114–130 days, while it



Central European wild boar (*S. s. scrofa*) piglets suckling

lasts 133–140 days in older sows. Farrowing occurs between March and May, with litter sizes depending on the age and nutrition of the mother. The average litter consists of 4–6 piglets, with the maximum being 10–12.^{[3][b]} The piglets are whelped in a nest constructed from twigs, grasses and leaves. Should the mother die prematurely, the piglets are adopted by the other sows in the sounder.^[40]

Newborn piglets weigh around 600–1,000 grams, lacking underfur and bearing a single milk incisor and canine on each half of the jaw.^[3] There is intense competition between the piglets over the most milk-rich nipples, as the best fed young grow faster and have stronger constitutions.^[40] The piglets do not leave the lair for their first week of life. Should the mother be absent, the piglets lie closely pressed to each other. By two weeks of age, the piglets begin accompanying their mother on her journeys. Should danger be detected, the piglets take cover or stand immobile, relying on their camouflage to keep them hidden. The neonatal coat fades after three months, with adult colouration being attained at eight months. Although the lactation period lasts 2.5–3.5 months, the piglets begin displaying adult feeding behaviours at the age of 2–3 weeks. The permanent dentition is fully formed by 1–2 years. With the exception of the canines in males, the teeth stop growing during the middle of the fourth year. The canines in old males continue to grow throughout their lives, curving strongly as they age. Sows attain sexual maturity at the age of one year, with males attaining it a year later. However, estrus usually first occurs after two years in sows, while males begin participating in the rut after 4–5 years, as they are not permitted to mate by the older males.^[3] The maximum lifespan in the wild is 10–14 years, though few specimens survive past 4–5 years.^[41] Boars in captivity have lived for 20 years.^[8]

Ecology

Habitat and sheltering behaviour



An individual from higher ridges of Himalayas at 9,600 ft in Pangolakha Wildlife Sanctuary, Sikkim, India.

The wild boar inhabits a diverse array of habitats from boreal taigas to deserts.^[3] In mountainous regions, it can even occupy alpine zones, occurring up to 1,900 metres in the Carpathians, 2,600 metres in the Caucasus and up to 3,600–4,000 metres in the mountains in Central Asia and Kazakhstan.^[3] In order to survive in a given area, wild



Wild boar frequently wallow in mud, possibly to regulate temperature or remove parasites

boars require a habitat fulfilling three conditions: heavily brushed areas providing shelter from predators, water for drinking and bathing purposes and an absence of regular snowfall.^[42] The main habitats favoured by boars in Europe are deciduous and mixed forests, with the most favourable areas consisting of forest composed of oak and beech enclosing marshes and meadows. In the Białowieża Forest, the animal's primary habitat consists of well developed, broad-leaved and mixed forests, along with marshy mixed forests, with coniferous forests and undergrowths being of secondary importance. Forests made up entirely of oak groves and beech are used only during the fruit-bearing season. This is in contrast to the Caucasian and Transcaucasian mountain areas, where boars will occupy such fruit-bearing forests year-round. In the mountainous areas of the Russian Far East, the species inhabits nutpine groves, hilly mixed forests where Mongolian oak and Korean pine are present, swampy mixed taiga and coastal oak forests. In Transbaikalia, boars are restricted to river valleys with nutpine and shrubs. Boars are regularly encountered

in pistachio groves in winter in some areas of Tajikistan and Turkmenia, while in spring they migrate to open deserts; boar have also colonised deserts in several areas they have been introduced to.^{[3][42][43]} On the islands of Komodo and Rinca, the boar mostly inhabits savanna or open monsoon forests, avoiding heavily forested areas unless pursued by humans.^[9] Wild boar are known to be competent swimmers, capable of covering long distances. In 2013, one boar was reported to have completed the seven mile swim from France to Alderney in the Channel Islands. Due to concerns about disease it was shot and incinerated.^[44]

Wild boar rest in shelters, which contain insulating material like spruce branches and dry hay. These resting places are occupied by whole families (though males lie separately), and are often located in the vicinity of streams, in swamp forests, in tall grass or shrub thickets. Boars never defecate in their shelters, and will cover themselves with soil and pine needles when irritated by insects.^[8]

Diet

The wild boar is a highly versatile omnivore, whose diversity in choice of food rivals that of humans.^[31] Their foods can be divided into four categories:

- Rhizomes, roots, tubers and bulbs, all of which are dug up throughout the year in the animal's whole range.^[3]
- Nuts, berries, and seeds, which are consumed when ripened and are dug up from the snow when abundant.^[3]
- Leaves, bark, twigs, and shoots, along with garbage.^[3]
- Earthworms, insects, mollusks, fish, rodents, insectivores, bird eggs, lizards, snakes, frogs, and carrion. Most of these prey items are taken in warm periods.^[3]

A 50 kg (110 lb) boar needs around 4,000-4,500 calories of food per day, though this required amount increases during winter and pregnancy,^[31] with the majority of its diet consisting of food items dug from the ground like underground plant material and burrowing animals.^[3] Acorns and beechnuts are invariably its most important food items in temperate zones, as they are rich in the carbohydrates necessary for the buildup of fat reserves needed to survive lean periods.^[31] In Western Europe, underground plant material favoured by boars includes bracken, willow herb, bulbs, meadow herb roots and bulbs, and the bulbs of cultivated crops. Such food is favoured in early spring and summer, but may also be eaten in autumn and winter during beechnut and acorn crop failures. Should regular wild foods become scarce, boars will eat tree bark and fungi, as well as visit cultivated potato and artichoke fields.^[3] Boar soil disturbance and foraging have been shown to facilitate invasive plants.^{[45][46]} Boars of the *vittatus* subspecies in Ujung Kulon National Park in Java differ from most other populations by their primarily frugivorous diet, which consists of 50 different fruit species, especially figs, thus making them important seed dispersers.^[4] The wild boar can consume numerous genera of poisonous plants without ill effect, including *Aconitum*, *Anemone*, *Calla*, *Caltha*, *Ferula*, and *Pteridium*.^[8]

Boars may occasionally prey on small vertebrates like newborn deer fawns, leporids and galliform chicks.^[31] Boars inhabiting the Volga Delta and near some lakes and rivers of Kazakhstan have been recorded to feed extensively on fish like carp and Caspian roach. Boars in the former area will also feed on cormorant and heron chicks, bivalved molluscs, trapped muskrats and mice.^[3] There is at least one record of a boar killing and eating a bonnet macaque in southern India's Bandipur National Park, though this may have been a case of



Male Indian boar (*S. s. cristatus*) feeding on a chital carcass

intraguild predation, brought on by interspecific competition for human handouts.^[47]

Predators



Tigers killing a wild boar in Kanha Tiger Reserve

Piglets are vulnerable to attack from medium-sized felids like lynx, jungle cats and snow leopards and other carnivorans like brown bears and yellow-throated martens.^[3]

The grey wolf is the main predator of wild boar throughout most of its range. A single wolf can kill around 50-80 boars of differing ages in one year.^[3] In Italy^[48] and Belarus' Belovezhskaya Pushcha National Park, boars are the wolf's primary prey, despite an abundance of alternative, less powerful ungulates.^[48] Wolves are particularly threatening during the winter, when deep snow impedes the boars' movements. In the Baltic regions, heavy snowfall can allow wolves to eliminate boars from an area almost completely. Wolves primarily

target piglets and subadults, and only rarely attack adult sows. Adult males are usually avoided entirely.^[3] Dholes may also prey on boars, to the point of keeping their numbers down in northwestern Bhutan, despite there being many more cattle in the area.^[49]

Leopards are predators of wild boar in the Caucasus, Transcaucasia, the Russian Far East, India, China,^[50] and Iran. In most areas, boars constitute only a small part of the leopard's diet. However, in Iran's Sarigol National Park, boars are the second most frequently targeted prey species after mouflon, though adult individuals are generally avoided, as they are above the leopard's preferred weight range of 10–40 kg (22–88 lb).^[51] This dependence on wild boar is largely due in part to the local leopard subspecies' large size.^[52]



Banded pig (*S. s. vittatus*) eaten by Komodo dragons

Boars of all ages were once the primary prey of tigers in Transcaucasia, Kazakhstan, Middle Asia and the Far East up until the late 19th century.

In modern times, tiger numbers are too low to have a limiting effect on boar populations. A single tiger can systematically destroy an entire sounder by preying on its members one by one, before moving on to another herd. Tigers have been noted to chase boars for longer distances than with other prey. In two rare cases, boars were reported to gore a small tiger and a tigress to death in self-defense.^[53] In the Amur region, wild boars are one of the two most important prey species for tigers alongside the Manchurian wapiti, with the two species collectively comprising roughly 80% of the felid's prey.^[54] In Sikhote Alin, a tiger can kill 30-34 boars a year.^[8] Studies of tigers in India indicate that boars are usually secondary in preference to various cervids and bovids,^[55] though when boars are targeted, healthy adults are caught more frequently than young and sick specimens.^[56]

On the islands of Komodo, Rinca, and Flores, the boar's main predator is the Komodo dragon.^[9]

Range

Reconstructed range

The species originally occurred in North Africa and much of Eurasia; from the British Isles to Korea and the Sunda Islands. The northern limit of its range extended from southern Scandinavia to southern Siberia and Japan. Within this range, it was only absent in extremely dry deserts and alpine zones. It was once found in North Africa along the Nile valley up to Khartoum and north of the Sahara. The species occurs on a few Ionian and Aegean Islands, sometimes swimming between islands.^[57] The reconstructed northern boundary of the animal's Asian range ran from Lake Ladoga (at 60°N) through the area of Novgorod and Moscow into the southern Urals, where it reached 52°N. From there, the boundary passed Ishim and farther east the Irtysh at 56°N. In the eastern Baraba steppe (near Novosibirsk) the boundary turned steep south, encircled the Altai Mountains, and went again eastward including the Tannu-Ola Mountains and Lake Baikal. From here the boundary went slightly north of the Amur River eastward to its lower reaches at the Sea of Okhotsk. On Sakhalin, there are only fossil reports of wild boar. The southern boundaries in Europe and Asia were almost invariably identical to the sea shores of these continents. It is absent in the dry regions of Mongolia from 44–46°N southward, in China westward of Sichuan and in India north of the Himalayas. It is absent in the higher elevations of Pamir and Tien Shan, though they do occur in the Tarim basin and on the lower slopes of the Tien Shan.^[3]

Present range

In recent centuries, the range of wild boar has changed dramatically, largely due to hunting by humans and more recently because of captive wild boar escaping into the wild. Prior to the 20th century, boar populations had declined in numerous areas, with British populations probably becoming extinct during the 13th century.^[58] In Denmark, the last boar was shot at the beginning of the 19th century, and in 1900 they were absent in Tunisia and Sudan and large areas of Germany, Austria, and Italy. In Russia they were extirpated in wide areas in the 1930s.^[3] The last boar in Egypt reportedly died on 20 December 1912 in the Giza Zoo, with wild populations having disappeared around 1894–1902. Prince Kamal el Dine Hussein attempted to repopulate Wadi El Natrun with boars of Hungarian stock, but they were quickly exterminated by poachers.^[59]

A revival of boar populations began in the middle of the 20th century. By 1950 wild boar had once again reached their original northern boundary in many parts of their Asiatic range. By 1960, they reached Leningrad and Moscow, and by 1975 they were to be found in Archangelsk and Astrakhan. In the 1970s they again occurred in Denmark and Sweden, where captive animals escaped and now survive in the wild. In England, wild boar populations re-established themselves in the 1990s, after escaping from specialist farms that had imported European stock.^[58]

Status in Britain

Wild boar were apparently already becoming rare by the 11th century, since a 1087 forestry law enacted by William the Conqueror punishes through blinding the unlawful killing of boar. Charles I attempted to reintroduce the species into the New Forest, though this population was exterminated during the Civil War. A similar attempt was made in Dorsetshire's Bere Wood, though these were again exterminated after one specimen injured a horse belonging to the sporting writer Charles James Apperley.^[60]

Between their medieval extinction and the 1980s, when wild boar farming began, only a handful of captive wild boar, imported from the continent, were present in Britain. Occasional escapes of wild boar



Mixed sounder of wild boar and domestic pigs at Culzie, Scotland

from wildlife parks have occurred as early as the 1970s, but since the early 1990s significant populations have re-established themselves after escapes from farms; the number of which has increased as the demand for wild boar meat has grown. A 1998 MAFF (now DEFRA) study on wild boar living wild in Britain confirmed the presence of two populations of wild boar living in Britain; one in Kent/East Sussex and another in Dorset.^[58] Another DEFRA report, in February 2008,^[61] confirmed the existence of these two sites as 'established breeding areas' and identified a third in Gloucestershire/Herefordshire; in the Forest of Dean/Ross on Wye area. A 'new breeding population' was also identified in Devon. There is another significant population in Dumfries and Galloway. Populations estimates were as follows:

- The largest population, in Kent/East Sussex, was then estimated at approximately 200 animals in the core distribution area.
- The second largest, in Gloucestershire/Herefordshire, was first estimated to be in excess of 100 animals. Legally classified as dangerous wild animals, the group is known to be feral descendants of domestic (Tamworth) pigs abandoned nearby. Their numbers grew by 2016 to at least 1500 and the Forestry Commission planned to reduce the total to a manageable 400. "Adult males can reach twenty stone (125 kg), run at thirty miles an hour, and can jump or barge through all but the strongest of fences. Also they are not afraid of humans, so (unlike deer) you can't just shoo them out of your garden."^[62]
- The smallest, in west Dorset, was estimated to be fewer than 50 animals.
- Since winter 2005/6 significant escapes/releases have also resulted in animals colonising areas around the fringes of Dartmoor, in Devon. These are considered as an additional single 'new breeding population' and currently estimated to be up to 100 animals.

Population estimates for the Forest of Dean are disputed as at the time that the DEFRA population estimate was 100, a photo of a boar sounder in the forest near Staunton with over 33 animals visible was published, and at about the same time over 30 boar were seen in a field near the original escape location of Weston under Penyard many miles away. In early 2010 the Forestry Commission embarked on a cull,^[63] with the aim of reducing the boar population from an estimated 150 animals to 100. By August it was stated that efforts were being made to reduce the population from 200 to 90, but that only 25 had been killed.^[64] The failure to meet cull targets was confirmed in February 2011.^[65]

Wild boar have crossed the River Wye into Monmouthshire, Wales. Iolo Williams, the BBC Wales wildlife expert, attempted to film Welsh boar in late 2012.^[66] Many other sightings, across the UK, have also been reported.^[67] The effects of wild boar on the UK's woodlands were discussed with Ralph Harmer of the Forestry Commission on the BBC Radio's *Farming Today* radio programme in 2011. The programme prompted activist writer George Monbiot to propose a thorough population study, followed by the introduction of permit-controlled culling.^[68]

Introduction to North America

While domestic pigs, both captive and feral (popularly termed "razorbacks"), have been in North America since the earliest days of European colonization, pure wild boar were not introduced into the New World until the 19th century. The suids were released into the wild by wealthy landowners as big game animals. The initial introductions took place in fenced enclosures, though several escapes occurred, with the escapees sometimes intermixing with already established feral pig populations.

The first of these introductions occurred in New Hampshire in 1890. Thirteen wild boar from Germany were purchased by Austin Corbin from Carl Hagenbeck, and released into a 9,500 hectare game preserve in Sullivan County. Several of these boars escaped, though they were quickly hunted down by locals. Two further

introductions were made since the original stocking, with several escapes taking place due to breaches in the game preserve's fencing. These escapees have ranged widely, with some specimens having been observed crossing into Vermont.^[69]

In 1902, 15-20 wild boar from Germany were released into a 3,200 hectare estate in Hamilton County, New York. Several specimens escaped six years later, dispersing into the William C. Whitney Wilderness Area, with their descendents surviving for at least 20 years.^[69]

The most successful boar introduction in the US took place in western North Carolina in 1912, when 13 boars of undetermined European origin were released into two fenced enclosures in a game preserve in Hooper Bald, Graham County. Most of the specimens remained in the preserve for the next decade, until a large-scale hunt caused the remaining animals to break through their confines and escape. Some of the boars migrated to Tennessee, where they intermixed with both free ranging and feral pigs in the area. In 1924, a dozen Hooper Bald wild pigs were shipped to California and released in a property between Carmel Valley and the Los Padres National Forest. These hybrid boar were later used as breeding stock on various private and public lands throughout the state, as well as in other states like Florida, Georgia, South Carolina, West Virginia and Mississippi.^[69]

Several wild boars from Leon Springs and the San Antonio, Saint Louis and San Diego Zoos were released in the Powder Horn Ranch in Calhoun County, Texas, in 1939. These specimens escaped and established themselves in surrounding ranchlands and coastal areas, with some crossing the Espiritu Santo Bay and colonising Matagorda Island. Descendents of the Powder Horn Ranch boars were later released onto San José Island and the coast of Chalmette, Louisiana.^[69]

Wild boar of unknown origin were stocked in a ranch in the Edwards Plateau in the 1940s, only to escape during a storm and hybridise with local feral pig populations, later spreading into neighbouring counties.^[69]

Starting in the mid-80s, several boars purchased from the San Diego Zoo and Tierpark Berlin were released into the United States. A decade later, more specimens from farms in Canada and Białowieża Forest were let loose. In recent years, wild pig populations have been reported in 44 states within the US, most of which are likely wild boar-feral hog hybrids. Pure wild boar populations may still be present, but are extremely localised.^[69]

Diseases and parasites

Wild boars are known to host at least 20 different parasitic worm species, with maximum infections occurring in summer. Young animals are vulnerable to helminths like *Metastrongylus*, which are consumed by boars through earthworms, and cause death by parasitising the lungs. Wild boar also carry parasites known to infect humans, including *Gastrodiscoides*, *Trichinella spiralis*, *Taenia solium*, and *Balantidium coli*. Wild boar in southern regions are frequently infested with ticks (*Dermacentor*, *Rhipicephalus*, and *Hyalomma*) and hog lice. The species also suffers from blood-sucking flies, which it escapes by bathing frequently or hiding in dense shrubs.^[3]



"Razorbacks" confronting an alligator in Florida



Lesions consistent with bovine tuberculosis on the lower jaw and lung of a wild boar

Swine plague spreads very quickly in wild boar, with epizootics being recorded in Germany, Poland, Hungary, Belarus, the Caucasus, the Far East, Kazakhstan, and other regions. Foot-and-mouth disease can also take on epidemic proportions in boar populations. The species occasionally, but rarely contracts Pasteurellosis, hemorrhagic septicemia, tularemia and anthrax. Wild boar may on occasion contract swine erysipelas through rodents or hog lice and ticks.^[3]

Relationships with humans

In culture



Upper Paleolithic cave painting, Altamira, Spain. This is one of the earliest known depictions of the species.^[70]

The wild boar features prominently in the cultures of Indo-European people, many of which saw the animal as embodying warrior virtues. Cultures throughout Europe and Asia Minor saw the killing of a boar as proof of one's valor and strength. Neolithic hunter gatherers depicted reliefs of ferocious wild boars on their temple pillars at Göbekli Tepe some 11,600 years ago.^{[71][72]} Virtually all heroes in Greek mythology fight or kill a boar at one point. The demigod Herakles' third labour involves the capture of the Erymanthian Boar, Theseus slays the wild sow Phaea, and a disguised Odysseus is recognised by his handmaiden Eurycleia by the scars inflicted on him by a boar during a hunt in his youth.^[73] To the mythical Hyperboreans, the boar represented spiritual authority.^[70] Several Greek myths use the boar as a symbol of darkness, death and winter. One example is the story of the youthful Adonis, who is killed by a boar and is permitted by Zeus to depart from

Hades only during the spring and summer period. This theme also occurs in Irish and Egyptian mythology, where the animal is explicitly linked to the month of October, therefore autumn. This association likely arose from aspects of the boar's actual nature. Its dark colour was linked to the night, while its solitary habits, proclivity to consume crops and nocturnal nature were associated with evil.^[74] The foundation myth of Ephesus has the city being built over the site where prince Androklos of Athens killed a boar.^[75] Boars were frequently depicted on Greek funerary monuments alongside lions, representing gallant losers who have finally met their match, as opposed to victorious hunters as lions are. The theme of the doomed, yet valorous boar warrior also occurred in Hittite culture, where it was traditional to sacrifice a boar alongside a dog and a prisoner of war after a military defeat.^[73]

The boar as a warrior also appears in Scandinavian, Germanic and Anglo-Saxon culture, with its image having been frequently engraved on helmets, shields and swords. According to Tacitus, the Baltic Aesti featured boars on their helmets, and may have also worn boar masks. The boar and pig were held in particularly high esteem by the Celts, who considered them to be their most important sacred animal. Some Celtic deities linked to boars include Moccus and Veteris. It has been suggested that some early myths surrounding the Welsh hero Culhwch involved the character being the son of a boar god.^[73] Nevertheless, the importance of the boar as a culinary item among Celtic tribes may have been exaggerated in popular culture by the *Asterix* series, as wild boar bones are rare among Celtic archaeological sites, and the few that occur show no signs of butchery, having probably been used in sacrificial rituals.^[76] The boar also appears in Vedic mythology. A story present in the Brāhmaṇas has Indra slaying an avaricious boar, who has stolen the treasure of the asuras, then giving its carcass to Vishnu, who offered it as a sacrifice to the gods. In the story's retelling in the Charaka Samhita, the boar is described as a form of Prajāpti, and is credited with having raised the earth from the primeval waters. In the Rāmāyaṇa and the Purāṇas, the same boar is portrayed as an avatar of Vishnu.^[77]

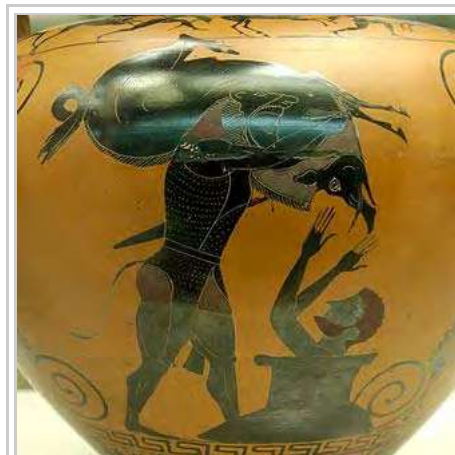
In Japanese culture, the boar is widely seen as a fearsome and reckless animal, to the point that several words and expressions in Japanese referring to recklessness include references to boars. The boar is the last animal of the oriental zodiac, with people born during the year of the Pig being said to embody the boar-like traits of determination and impetuosity. Among Japanese hunters, the boar's courage and defiance is a source of admiration, and it is not uncommon for hunters and mountain people to name their sons after the animal *inoshishi* (猪). Boars are also seen as symbols of fertility and prosperity; in some regions, it is thought that boars are drawn to fields owned by families including pregnant women, and hunters with pregnant wives are thought to have greater chances of success when boarhunting. The animal's link to prosperity was illustrated by its inclusion on the ¥10 note during the Meiji period, and it was once believed that a man could become wealthy by keeping a clump of boar hair in his wallet.^[78]

In the folklore of the Mongol Altai Uriankhai tribe, the wild boar was associated with the watery underworld, as it was thought that the spirits of the dead entered the animal's head, to be ultimately transported to the water.^[79] Prior to the conversion to Islam, the Kyrgyz people believed that they were descended from boars, and thus did not eat pork. In Buryat mythology, the forefathers of the Buryats descended from heaven and were nourished by a boar.^[80] In China, the boar is the emblem of the Miao people.^[70]

The boar (*sanglier*) is frequently displayed in English, Scottish and Welsh heraldry. As with the lion, the boar is often shown as armed and langued. As with the bear, Scottish and Welsh heraldry displays the boar's head with the neck cropped, unlike the English version, which retains the neck.^[81] The white boar served as the badge of King Richard III of England, who distributed it among his northern retainers during his tenure as Duke of Gloucester.^[82]

As a game animal and food source

Humans have been hunting boar for millennia, with the earliest artistic depictions of such activities dating back to the Upper Paleolithic.^[73] The animal was seen as a source of food among the Ancient Greeks, as well as a sporting challenge and source of epic narratives. The Romans inherited this tradition, with one of its first practitioners being Scipio Aemilianus. Boar hunting became particularly popular among the young nobility during the 3rd century BC as preparation for manhood and battle. A typical Roman boarhunting tactic involved surrounding a given area with large nets, then flushing the boar with dogs and immobilising it with smaller nets. The animal would then be dispatched with a *venabulum*, a short spear with a crossguard at the base of the blade. More than their Greek predecessors, the Romans extensively took inspiration from boarhunting in their art and sculpture. With the ascension of Constantine the Great, boarhunting took on Christian allegorical themes, with the animal being portrayed as a "black beast" analogous to the dragon of Saint George. Boarhunting continued after the fall of the Western Roman Empire, though the Germanic tribes considered the red deer to be a more noble and worthy quarry. The post-Roman nobility hunted boar as their predecessors did, but primarily as training for battle



Herakles brings Eurystheus the Erymanthian boar, as depicted on a black-figure amphora (c. 550 BC) from Vulci.



Wild boar haunches and trophy, Umbria, Italy.

rather than sport. It was not uncommon for medieval hunters to deliberately hunt boars during the breeding season, when the animals were more aggressive. During the Renaissance, when deforestation and the introduction of firearms reduced boar numbers, boarhunting became the sole prerogative of the nobility, one of many charges brought up against the rich during the German Peasants' War and the French Revolution.^[83] During the mid-20th century, 7,000-8,000 boars were caught in the Caucasus, 6,000-7,000 in Kazakhstan, and about 5,000 in Central Asia during the Soviet period, primarily through use of dogs and beats.^[3] In Nepal, farmers and poachers eliminate boars by baiting balls of wheat flour containing explosives with kerosene oil, with the animals' chewing motions triggering the devices.^[84]

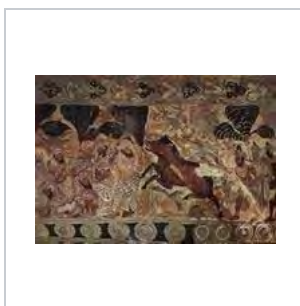


A wild boar dish served in Helsinki, Finland.

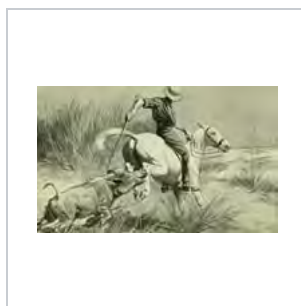
Wild boar can thrive in captivity, though piglets grow slowly and poorly without their mothers. Products derived from wild boar include meat, hide and bristles.^[3] *Apicius* devotes a whole chapter to the cooking of boar meat, providing ten recipes involving roasting, boiling and what sauces to use. The Romans usually served boar meat with garum.^[85] Boar's head was the centrepiece of most medieval Christmas celebrations among the nobility.^[86] Although growing in popularity as a captive-bred source of food, the wild boar takes longer to mature than most domestic pigs, and is usually smaller and produces less meat. Nevertheless, wild boar meat is leaner and healthier than pork,^[87] being of higher nutritional value and having a much higher concentration of essential amino acids.^[88] Most meat-dressing organisations agree that a boar carcass should yield 50 kg (110 lb) of meat on average. Large specimens can yield 15–20 kg (33–44 lb) of fat, with some giants yielding 30 kg (66 lb) or more. A boar hide can measure 300 dm², and can yield 350-1000 grams of bristle and 400 grams of underwool.^[3]



Roman relief of a dog confronting a boar, Cologne



Southern Indian depiction of boar hunt, c. 1540



Pigsticking in British India



Boar shot in Volgograd Oblast, Russia

Crop and garbage raiding

Boars can be damaging to agriculture. Populations living on the outskirts of towns or farms can dig up potatoes and damage melons, watermelons and maize. They generally only encroach upon farms when natural food is scarce. In the Belovezh forest for example, 34-47% of the local boar population will enter fields in years of moderate availability of natural foods. While the role of boars in damaging crops is often exaggerated,^[3] cases are known of boar depredations causing famines, as was the case in Hachinohe, Japan in 1749, where 3,000 people died of what became known as the 'wild boar famine'. Still within Japanese culture, the boar's status as vermin is expressed through its title as "king of pests" and the popular saying (addressed to young men in rural



An adult sow and young that have broken open a litter bag in Berlin seeking food.

areas) "When you get married, choose a place with no wild boar."^{[78][89]} In Central Europe, farmers typically repel boars through distraction or fright, while in Kazakhstan it is usual to employ guard dogs in plantations. Although large boar populations can play an important role in limiting forest growth, they are also useful in keeping pest populations such as June bugs under control.^[3] The growth of urban areas and corresponding decline in natural boar habitats has led to some sounders entering human habitations in search of food. As in natural conditions, sounders in peri-urban areas are matriarchal, though males tend to be much less represented, and adults of both sexes can be up to 35% heavier than their forest-dwelling counterparts. As of 2010, at least 44 cities in 15 countries have experienced problems of some kind relating to the presence of habituated wild boar.^[90]

Attacks on humans

Actual attacks on humans are rare, but can be serious, resulting in multiple penetrating injuries to the lower part of the body. They generally occur during the boars' rutting season from November–January, in agricultural areas bordering forests or on paths leading through forests. The animal typically attacks by charging and pointing its tusks towards the intended victim, with most injuries occurring on the thigh region. Once the initial attack is over, the boar steps back, takes position and attacks again if the victim is still moving, only ending once the victim is completely incapacitated.^{[91][92]}

Boar attacks on humans have been documented since the Stone Age, with one of the oldest depictions being a cave painting in Bhimbetaka, India. The Romans and Ancient Greeks wrote of these attacks (Odysseus was wounded by a boar), and several attacks are shown on the headstones of England's 12th century Severn Temple graveyard. A 2012 study compiling recorded attacks from 1825-2012 found accounts of 665 human victims of both wild boars and feral pigs, with the majority (19%) of attacks in the animal's native range occurring in India. Most of the attacks occurred in rural areas during the winter months in non-hunting contexts, and were committed by solitary males.^[93]



Depiction of a stylised boar attacking a man, Bhimbetaka, India

See also

- Domestic pig
- Feral pig
- Peccary
- Indian pig

Notes

- a. It is from the male boar's solitary habits that the species gets its name in numerous Romance languages. Although the Latin word for "boar" was *aper*, the French *sanglier* and Italian *cinghiale* derive from *singularis porcus*, which is Latin for "solitary pig".^[37]

- b. Thirteen has been observed in a captive specimen.^[39]

References

- Oliver, W. & Leus, K. (2008). "*Sus scrofa*". *IUCN Red List of Threatened Species. Version 2008*. International Union for Conservation of Nature. Retrieved 6 March 2013. Database entry includes a brief justification of why this species is of least concern.
- Wozencraft, W.C. (2005). "Order Carnivora". In Wilson, D.E.; Reeder, D.M. *Mammal Species of the World: A Taxonomic and Geographic Reference* (3rd ed.). Johns Hopkins University Press. pp. 532–628. ISBN 978-0-8018-8221-0. OCLC 62265494.
- Heptner, V. G. ; Nasimovich, A. A. ; Bannikov, A. G. ; Hoffman, R. S. (1988) *Mammals of the Soviet Union* (<https://archive.org/stream/mammalsofsovietu11988hept#page/18/mode/2up>), Volume I, Washington, D.C. : Smithsonian Institution Libraries and National Science Foundation, pp. 19-82
- Oliver, W. L. R. et al. 1993. The Eurasian Wild Pig (*Sus scrofa*). In Oliver, W. L. R., ed., *Pigs, Peccaries, and Hippos – 1993 Status Survey and Conservation Action Plan*, 112-121. IUCN/SSC Pigs and Peccaries Specialist Group, ISBN 2-8317-0141-4
- Chen, K. et al. "Genetic Resources, Genome Mapping and Evolutionary Genomics of the Pig (*Sus scrofa*)". *Int J Biol Sci* 2007; 3(3):153-165. doi:10.7150/ijbs.3.153. Available from <http://www.ijbs.com/v03p0153.htm>
- Kurtén, Björn (1968). Pleistocene mammals of Europe. Weidenfeld and Nicolson. pp. 153-155
- Marsan & Mattioli 2013, pp. 75–76
- Baskin, L. & Danell, K. (2003), *Ecology of Ungulates: A Handbook of Species in Eastern Europe and Northern and Central Asia*, Springer Science & Business Media, pp. 15-38, ISBN 3-540-43804-1
- Affenberg, W. (1981), *The Behavioral Ecology of the Komodo Monitor*, University Press of Florida, pp. 248, ISBN 081300621X
- "Online Etymological Dictionary". Retrieved 2014-10-08.
- "Latin Dictionary and Grammar Resources". Retrieved 2014-10-08.
- Cabanau 2001, pp. 24
- Ruvinsky, A. et al. (2011). "Systematics and evolution of the pig". In: Ruvinsky A, Rothschild MF (eds), *The Genetics of the Pig*. 2nd ed. CAB International, Oxon. pp. 1-13. ISBN 978-1-84593-756-0
- Groves, C. P. et al. 1993. The Eurasian Suids *Sus* and *Babyrousa*. In Oliver, W. L. R., ed., *Pigs, Peccaries, and Hippos – 1993 Status Survey and Conservation Action Plan*, 107-108. IUCN/SSC Pigs and Peccaries Specialist Group, ISBN 2-8317-0141-4
- Hemmer, H. (1990), *Domestication: The Decline of Environmental Appreciation*, Cambridge University Press, pp. 55-59, ISBN 0-521-34178-7
- Kingdon, J. (1997). *The Kingdon Guide to African Mammals*. p. 329. Academic Press Limited. ISBN 0-12-408355-2
- Groves, C. (2008). *Current views on the taxonomy and zoogeography of the genus Sus*. pp. 15–29 in Albarella, U., Dobney, K, Ervynck, A. & Rowley-Conwy, P. Eds. (2008). *Pigs and Humans: 10,000 Years of Interaction*. Oxford University Press. ISBN 978-0-19-920704-6
- Sterndale, R. A. (1884), *Natural history of the Mammalia of India and Ceylon* (<https://archive.org/stream/naturalhistoryof00ster#page/414/mode/2up>), Calcutta : Thacker, Spink, pp. 415-420
- Scheggi 1999, pp. 86–89
- Marsan & Mattioli 2013, pp. 14–15
- Clutton-Brock, J. (1999), *A Natural History of Domesticated Mammals*, Cambridge University Press, pp. 91-99, ISBN 0-521-63495-4
- The related peccary (*Pecari tajacu*) has been domesticated in the New World. "Commercial Farming of Collared Peccary: A Large-scale Commercial Farming of Collared Peccary (*Tayassu tajacu*) in North-eastern Brazil", 2007-4-30, http://pigtrop.cirad.fr/subjects/genetic_and_biodiversity/commercial_farming_of_collared_peccary .
- *Sarah M. Nelson Ancestors for the Pigs. Pigs in prehistory. (1998)
- Rosenberg M, Nesbitt R, Redding RW, Peasnell BL (1998). Hallan Çemi, pig husbandry, and post-Pleistocene adaptations along the Taurus-Zagros Arc (Turkey) (http://www.persee.fr/web/revues/home/prescript/article/paleo_0153-9345_1998_num_24_1_4667). *Paleorient*, 24(1):25–41.
- Vigne, JD; Zazzo, A; Saliège, JF; Poplin, F; Guilaine, J; Simmons, A (2009). "Pre-Neolithic wild boar management and introduction to Cyprus more than 11,400 years ago". *Proceedings of the National Academy of Sciences of the United States of America*. **106** (38): 16135–8. doi:10.1073/pnas.0905015106. PMC 2752532. PMID 19706455.

26. Giuffra, E; Kijas, JM; Amarger, V; Carlborg, O; Jeon, JT; Andersson, L (2000). "The origin of the domestic pig: independent domestication and subsequent introgression". *Genetics*. **154** (4): 1785–91. PMC 1461048 . PMID 10747069.
27. Jean-Denis Vigne; Anne Tresset & Jean-Pierre Digard (July 3, 2012). *History of domestication* (PDF) (Speech).
28. BBC News, "Pig DNA reveals farming history" (<http://news.bbc.co.uk/2/hi/science/nature/6978203.stm>) 4 September 2007. The report concerns an article in the journal *PNAS*
29. Larson, G; Albarella, U; Dobney, K; Rowley-Conwy, P; Schibler, J; Tresset, A; Vigne, JD; Edwards, CJ; et al. (2007). "Ancient DNA, pig domestication, and the spread of the Neolithic into Europe". *Proceedings of the National Academy of Sciences of the United States of America*. **104** (39): 15276–81. doi:10.1073/pnas.0703411104. PMC 1976408 . PMID 17855556.
30. Scheggi 1999, pp. 87
31. Marsan & Mattioli 2013, pp. 70–72
32. Marsan & Mattioli 2013, pp. 26
33. Marsan & Mattioli 2013, pp. 28
34. Cabanau 2001, pp. 29
35. Cabanau 2001, pp. 28
36. Drabeck, D.H.; Dean, A.M.; Jansa, S.A. (June 1, 2015). "Why the honey badger don't care: Convergent evolution of venom-targeted nicotinic acetylcholine receptors in mammals that survive venomous snake bites.". *Toxicon*. Elsevier. **99**: 68. doi:10.1016/j.toxicon.2015.03.007.
37. Scheggi 1999, pp. 20–22
38. Ulrike Weiler et al. "Penile Injuries in Wild and Domestic Pigs", *Animals* 2016, 6, 25; doi:10.3390/ani6040025
39. "Eight little piggies went a-marching". Whipsnade Zoo. Retrieved 22 May 2015.
40. Marsan & Mattioli 2013, pp. 83–86
41. Marsan & Mattioli 2013, pp. 87–90
42. Marsan & Mattioli 2013, pp. 55–58
43. Long, J. L. (2003), *Introduced Mammals of the World: Their History, Distribution and Influence*, Cabi Publishing, ISBN 978-0-85199-748-3
44. "Alderney wild boar that swam from France shot over disease fear". *BBC News*. 14 November 2013.
45. Tierney, Trisha A.; Cushman, J. Hall (2006-05-12). "Temporal Changes in Native and Exotic Vegetation and Soil Characteristics following Disturbances by Feral Pigs in a California Grassland". *Biological Invasions*. **8** (5): 1073–1089. doi:10.1007/s10530-005-6829-7.
46. Oldfield, Callie A.; Evans, Jonathan P. (2016-03-01). "Twelve years of repeated wild hog activity promotes population maintenance of an invasive clonal plant in a coastal dune ecosystem". *Ecology and Evolution*. **6** (8).
47. Gupta, S. et al. A wild boar hunting: predation on a bonnet macaque by a wild boar in the Bandipur National Park, southern India (<http://www.currentscience.ac.in/Volumes/106/09/1186.pdf>). *Current Science*. Vol. 106, No. 9. (10 May 2014)
48. Marsan & Mattioli 2013, pp. 96–97
49. Thinley P, Kamler JF, Wang SW, Lham K, Stenkewitz U, et al. (2011) Seasonal diet of dholes (*Cuon alpinus*) in northwestern Bhutan. *Mamm Biol* 76: 518–520 DOI:10.1016/j.mambio.2011.02.003
50. Heptner, V. G.; Sludskii, A. A. (1992). *Mammals of the Soviet Union: Carnivora (hyaenas and cats), Volume 2* (<https://archive.org/stream/mammalsofsov221992gept#page/248/mode/2up>). Smithsonian Institution Libraries and National Science Foundation. p. 248-252.
51. Taghdisi, M. et al. (2013). "Diet and habitat use of the endangered Persian leopard (*Panthera pardus saxicolor*) in northeastern Iran" (<http://journals.tubitak.gov.tr/zoology/issues/zoo-13-37-5/zoo-37-5-4-1301-20.pdf>). *Turkish Journal of Zoologist*. **37**: 554-561. doi:10.3906/zoo-1301-20
52. Elmira Sharbafi, Mohammad S. Farhadinia, Hamid R. Rezaie, Alex Richard Braczkowski. (2016) Prey of the Persian Leopard (*Panthera pardus saxicolor*) in a mixed forest-steppe landscape in northeastern Iran (Mammalia: Felidae). *Zoology in the Middle East*, 1-8.
53. Heptner, V. G.; Sludskii, A. A. (1992). *Mammals of the Soviet Union: Carnivora (hyaenas and cats), Volume 2* (<https://archive.org/stream/mammalsofsov221992gept#page/174/mode/2up>). Smithsonian Institution Libraries and National Science Foundation. p. 174, 185.
54. Miquelle, Dale G.; et al. (1996). "Food habits of Amur tigers in the Sikhote-Alin Zapovednik and the Russian Far East, and implications for conservation" (PDF). *Journal of Wildlife Research*. **1** (2): 138.
55. Ramesh, T.; Snehalatha, V.; Sankar, K. & Qureshi, Qamar (2009). "Food habits and prey selection of tiger and leopard in Mudumalai tiger Reserve, Tamil Nadu, India". *J. Sci. Trans. Environ. Technov*. **2** (3): 170–181.

56. Schaller, G (1967). *The deer and the tiger: a study of wildlife in India*. p. 321.
57. Masseti, M. (2012), *Atlas of terrestrial mammals of the Ionian and Aegean islands*, Walter de Gruyter, pp. 139-141, ISBN 3-11-025458-1
58. "Wild boar in Britain". Britishwildboar.org.uk. 21 October 1998. Retrieved 30 July 2013.
59. Osborn, Dale. J.; Helmy, Ibrahim (1980), "The contemporary land mammals of Egypt (including Sinai)" (<https://archive.org/stream/contemporaryland05osbo#page/474/mode/2up>), Field Museum of Natural History, pp. 475-477
60. Bell, T. (1837), *A history of British Quadrupeds including the Cetacea*, Van Voorst, pp. 360-361
61. Government supports local communities to manage wild boar (<https://web.archive.org/web/20080504155956/http://www.defra.gov.uk/news/2008/080219b.htm>). Department for Environment, Food and Rural Affairs. 19 February 2008
62. <http://www.bbc.co.uk/programmes/b080wbwy>
63. "Wild boar cull is given go ahead". *BBC News*. 4 January 2010.
64. "Forest of Dean rangers battle to meet boar cull target". *BBC News*. 20 August 2010. Retrieved 13 November 2010.
65. Cull failing to control wild boar (<https://web.archive.org/web/20120530120926/http://www.theforester.co.uk/news.cfm?id=7400&searchword=wild>). *The Forester*. 25 February 2011.
66. "BBC Wales – Nature – Wildlife – Wild boar". *Bbc.co.uk*. 1 January 1970. Retrieved 30 July 2013.
67. "Wild Boar in Britain". Britishwildboar.org.uk. 31 December 2010. Retrieved 30 July 2013.
68. Monbiot, George (16 September 2011). "How the UK's zoophobic legacy turned on wild boar". *The Guardian*. London. Retrieved 16 September 2011. "I was prompted to write this article by an item I heard on the BBC's Farming Today programme at the beginning of the week. It was an interview with Ralph Harmer, who works for the Forestry Commission, about whether or not the returning boar are damaging our woodlands. I was struck by what the item did not say. Not once did the programme mention that this is a native species. The boar was discussed as if it were an exotic invasive animal, such as the mink or the grey squirrel. [...] Then, once we've found out how many boar, [...] should be culled to allow a gentle expansion but not an explosion, permits to shoot them should be sold, and the money used to compensate farmers whose crops the boar have damaged. Other hunting should be banned. This is how they do it in France."
69. Mayer, J. J. et al. (2009), *Wild Pigs: Biology, Damage, Control Techniques and Management* (<http://www.wildpigconference.com/pdf/SRNL-Mayer-Biology%20Damage%20Control.pdf>), Savannah River National Laboratory Aiken, South Carolina, SRNL-RP-2009-00869
70. Cabanau 2001, pp. 63
71. Charles C. Mann, Göbekli Tepe: The Birth of Religion (<http://ngm.nationalgeographic.com/2011/06/gobekli-tepe/mann-text>), *National Geographic* (June 2011)
72. Sandra Scham The World's First Temple (<http://archive.archaeology.org/0811/abstracts/turkey.html>), *Archaeology*, Volume 61 Number 6, November/December 2008
73. Mallory, J. P. & Adams, D. Q. (1997), *Encyclopedia of Indo-European Culture*, Taylor & Francis, pp. 426-428, ISBN 1-884964-98-2
74. Scheggi 1999, pp. 14–15
75. Scheggi 1999, pp. 16
76. Green, M. (2002), *Animals in Celtic Life and Myth*, Routledge, p. 46, ISBN 1-134-66531-8
77. Macdonell, A. A. (1898), *Vedic Mythology* (<https://books.google.com/books?id=b7Meabtj8mcC&pg=PA41&dq=veda+boar&hl=it&sa=X&ei=1uIyVMHnG8jXyQOo9oDoBQ&ved=0CEYQ6AEwAw#v=onepage&q=veda%20boar&f=false>), Motilal Banarsidass Publ., p. 41
78. Knight, J. (2003), *Waiting for Wolves in Japan: An Anthropological Study of People-wildlife Relations*, Oxford University Press, pp. 49-73, ISBN 0-19-925518-0
79. Pegg, C. (2001), *Mongolian Music, Dance, & Oral Narrative: Performing Diverse Identities*, University of Washington Press, p. 140, ISBN 0-295-98112-1
80. Holmberg, U. (1927), *The Mythology of All Races volume 4: Finno-Ugric, Siberian*, New York, Cooper Square Publishing Inc. pp. 502-503
81. Fox-Davies, A. C. (1909), *A complete guide to heraldry* (<https://archive.org/stream/completeguidetoh00foxdrich#page/198/mode/2up>), London, Edinburgh, T.C. & E.C. Jack, pp. 198-199
82. Wagner, J. A. (2001) *Encyclopedia of the Wars of the Roses*, ABC-CLIO, p. 15, ISBN 1-85109-358-3
83. Scheggi 1999, pp. 9–58
84. Shreshta, Tej Kumar (1997). *Mammals of Nepal: (with reference to those of India, Bangladesh, Bhutan and Pakistan)*. Steven Simpson Books. p. 207. ISBN 0-9524390-6-9

85. Scheggi 1999, pp. 30–35
86. Adamson, M. W. (2004), *Food in Medieval Times*, Greenwood Publishing Group, p. 35, ISBN 0-313-32147-7
87. Harris, C. (2009), *A Guide to Traditional Pig Keeping* (https://books.google.com/books?id=Jny0R4gEQxcC&pg=PA27&dq=wild+boar+products&hl=it&sa=X&ei=4BAxVLvoKiDZaonSgMgJ&redir_esc=y#v=onepage&q=wild%20boar%20products&f=false), Good Life Press, pp. 26–27, ISBN 1-904871-60-7
88. Strazdina, V. et al. "Nutritional Characteristics of Wild Boar Meat Hunted in Latvia" (http://lufb.ltu.lv/conference/foodbalt/2014/FoodBalt_Proceedings_2014-32-36.pdf), *Foodbalt* (2014)
89. Walker, B. "Commercial Growth and Environmental Change in Early Modern Japan: Hachinohe's Wild Boar Famine," *The Journal of Asian Studies*, Vol. 60, No. 2 (May, 2001), pp. 331.
90. Cahill, S., Llimona, F., Cabañeros, L. & Calomardo, F., 2012. "Characteristics of wild boar (*Sus scrofa*) habituation to urban areas in the Collserola Natural Park (Barcelona) and comparison with other locations" (http://abc.museucienciesjournals.cat/files/ABC_35-2_pp_221-233.pdf). *Animal Biodiversity and Conservation*, 35.2: 221–233.
91. Manipady, S. et al. (2006), "Death by attack from a wild boar" (<http://www.phossil.com/thom/4th%20July%20Hog/Wild%20Boar%20Attacks/Death%20By%20Wild%20Boar.pdf>), *Journal of clinical forensic medicine* 13 (2), 89-91
92. Gunduz, A. et al. (2007), "Wild Boar Attacks" (<http://www.phossil.com/thom/4th%20July%20Hog/Wild%20Boar%20Attacks/Wild%20Boar%20Attack%20III.pdf>), *Wilderness and Environmental Medicine*, **18**, 117-119
93. Mayer, John J., "Wild Pig Attacks on Humans" (2013). Wildlife Damage Management Conferences -- Proceedings. Paper 151. http://digitalcommons.unl.edu/icwdm_wdmconfproc/151

Bibliography

- Cabanau, Laurent (2001). *The Hunter's Library: Wild Boar in Europe*. Könemann. ISBN 3-8290-5528-5.
- Marsan, Andrea; Mattioli, Stefano (2013). *Il Cinghiale* (in Italian). Il Piviere (collana Fauna selvatica. Biologia e gestione). ISBN 978-88-96348-178.
- Scheggi, Massimo (1999). *La bestia nera: Caccia al cinghiale fra mito, storia e attualità* (in Italian). Editoriale Olimpia (collana Caccia). ISBN 88-253-7904-8.

Further reading

- Apollonio, M. et al. (1988), "The systematics of the wild boar (*Sus scrofa* L.) in Italy" (<http://www.tandfonline.com/doi/pdf/10.1080/11250008809386619>), *Bolletino di Zoologia*, 3:213-221
- Carden, R.F. (2012) "Review of the Natural History of Wild Boar (*Sus scrofa*) on the island of Ireland" (http://invasives.biodiversityireland.ie/wordpress/wp-content/uploads/natural_history_wild_boar_ireland_carden2012_final_report.pdf), Report prepared by Ruth Carden for the Northern Ireland Environment Agency, Northern Ireland, UK, National Parks & Wildlife Service, Department of Arts, Heritage and the Gaeltacht, Dublin, Ireland and the National Museum of Ireland – Education & Outreach Department.
- **(French)** Durantel, P. (2007), *Le sanglier et ses chasses*, Editions Artemis, ISBN 2844166032
- Greene, J. (2011), *The Golden-Bristled Boar: Last Ferocious Beast of the Forest*, University of Virginia Press, ISBN 0-8139-3103-7
- **(French)** Marillier, B. (2003), *Le sanglier héraldique*, Editions Cheminements, ISBN 2844781845
- Mayer, J. J. & Shedrow, C. B. (2007), *Annotated Bibliography of the Wild Pig (*Sus scrofa*): Environmental Information Document* (<http://www.wildpigconference.com/pdf/Wild%20Pig%20Annotated%20Bibliography.pdf>), *Washington Savannah River Company*
- **(Italian)** Padiglione, V. (1989), *Il cinghiale cacciatore: Antropologia simbolica della caccia in Sardegna*, Armando Editore (collana Antropologia culturale)
- Ronald M. Nowak (1999), *Walker's Mammals of the World* (6 ed.), Baltimore: Johns Hopkins University

Press, ISBN 0-8018-5789-9, LCCN 98023686

External links

- News related to Saskatchewan places moratorium on boar farming, says escaped boars should be killed at Wikinews
- Media related to *Sus scrofa* at Wikimedia Commons
- BBC profile (<http://www.bbc.co.uk/nature/wildfacts/factfiles/598.shtml>)
- "Boar, Wild". *Encyclopædia Britannica*. **3** (9th ed.). 1878.
- Jokelainen, P.; Näreaho, A.; Hälli, O.; Heinonen, M.; Sukura, A. (2012). "Farmed wild boars exposed to *Toxoplasma gondii* and *Trichinella* spp.". *Veterinary Parasitology*. **187** (1–2): 323–327. doi:10.1016/j.vetpar.2011.12.026. PMID 22244535.
- Species Profile- Wild Boar (*Sus scrofa*) (<http://www.invasivespeciesinfo.gov/animals/wildboar.shtml>), National Invasive Species Information Center, United States National Agricultural Library. Lists general information and resources for wild boar.
- View the *susScr3* (<https://genome.ucsc.edu/cgi-bin/hgTracks?db=susScr3>) genome assembly in the UCSC Genome Browser.



Wikisource has the text of the 1911 *Encyclopædia Britannica* article ***Boar***.



Wikispecies has information related to: ***Sus scrofa***



Wikiquote has quotations related to: ***Wild boar***

Retrieved from "https://en.wikipedia.org/w/index.php?title=Wild_boar&oldid=758095471"

Categories: IUCN Red List least concern species | Animals described in 1758

| Extant Pleistocene first appearances | Fauna of Iran | Mammals of Azerbaijan | Mammals of Bangladesh | Mammals of Indonesia | Mammals of Nepal | Mammals of Sri Lanka | Mammals of Europe | Mammals of Malaysia | Mammals of North America | Mammals of Canada | Mammals of the United States | Mammals of Argentina | Mammals of Uruguay | Mammals of South America | Mammals of Australia | Mammals of New Zealand | Megafauna of Eurasia | Megafauna of North Asia | Pigs | Urban animals

- This page was last modified on 3 January 2017, at 13:08.
- Text is available under the Creative Commons Attribution-ShareAlike License; additional terms may apply. By using this site, you agree to the Terms of Use and Privacy Policy. Wikipedia® is a registered trademark of the Wikimedia Foundation, Inc., a non-profit organization.