Feral Pig

Sus scrofa (Linnaeus, 1758)

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CONTENT AND TAXONOMIC COMMENTS

The feral pig (*Sus scrofa*) is native to northern Africa, Europe and Asia. The species was first introduced into the West Indies by Columbus in 1493 (Groves 1981) and Florida by DeSoto in 1593 (Gipson et al. 1998). Populations that now occur in the United States represent hybrid combinations of the European wild boar (*S. s. scrofa*) and domestic pig (*S. s. domesticus*; Rary et al. 1968, Wood and Lynn 1977). Common names include feral hog, feral swine, razorback, wild boar, and wild hog. Sweeney and Sweeney (1982) and Mayer and Brisbin (1991) review the life history of the feral pig in the United States.

DISTINGUISHING CHARACTERISTICS

The feral pig is a large, hoofed mammal with a flattened snout. Measurements are: total length, 153–240 cm; tail, 21–38 cm; hind foot, 23–35 cm; ear, 24–26 cm; weight, 66–272 kg. Male pigs are somewhat larger than females; these differences are evident at 15 months and increase with age (Dickson et al. 2001). The most common pelage color is black but considerable variation is present. Some are brown, reddish brown, spotted black or brown, black and white, or all white. The pelage is usually coarse and dense. The elongated, mobile snout has a flattened terminal surface punctuated by terminal nares. The feet have four toes terminating in hooves, but the weight is borne by the two larger, central digits. The upper canine teeth are triangular in cross section, recurved, and visible externally as tusks; they are larger than the lower canines. The dental formula is: I 3/3, C 1/1, P 4/4, M 3/3 = 44 (Figure 1). A complete description of morphological variation is found in Mayer and Brisbin (1991). The only other species in the South that resembles the feral pig is the collared peccary or javelina (*Pecari tajacu*) in southern Texas. See keys for details.

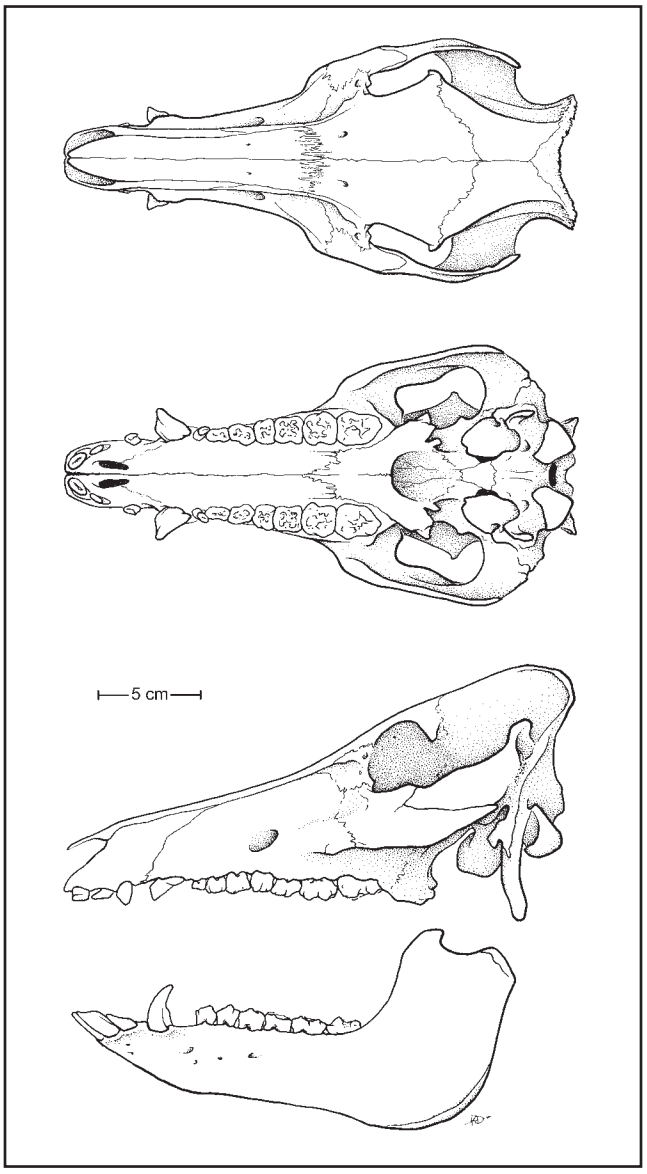

Figure 1. Dorsal, ventral, and lateral view of cranium and lateral view of mandible of *Sus scrofa* from Beaufort County, South Carolina (USNM 256035, male).

CONSERVATION STATUS

The feral pig has a global rank of Secure (NatureServe 2007). A conservation status rank of Not Applicable has been assigned by each state in the South where it occurs; the species is not a suitable target for conservation activities. In many areas, the pig is considered an important recreational resource as a big game species. Florida, North Carolina, Texas, Tennessee, and other southern states allow hunting during specified seasons (Whitaker and Hamilton 1998).

DISTRIBUTION

The feral pig is found in California, Arizona, New Mexico, Missouri and throughout the southern United States in scattered locations (Sweeney and

Sweeney 1982, Gipson et al. 1998). Figure 2 depicts the distribution of the pig in the South. Once widespread and numerous in Virginia (Bailey 1946, Handley 1979, Linzey 1998), the species now occurs only in the southeastern corner of the state (Mayer and Brisbin 1991) and along the coast (Duncan and Schwab 1986). The feral pig occurs along the coast and barrier islands of North Carolina (Whitaker and Hamilton 1998) and within the Great Smoky Mountain National Park (Johnston 1967, Bratton et al. 1982, Johnson et al. 1982, Lacki and Lancia 1986, Linzey 1995, Lancia et al. 1996). Populations in South Carolina occur along the Savannah River and the Coastal Plain (Golley 1966, Kurz and Marchinton 1972, Schacher and Pelton 1979, Wood and Brenneman 1980, Wood and Roark 1980, Lipscomb 1989, Cothran et al. 1991). In Georgia, disjunct populations occur on barrier islands (Warren and Ford 1997) and throughout the Coastal Plain, Piedmont, and southern Appalachians (Golley 1962, Laerm et al. 1981). It occurs widely throughout Florida (Hamilton 1941, Layne 1974, Maehr et al. 1990). The feral pig inhabits lowland areas in southwestern Alabama (Mayer and Brisbin 1991). In Mississippi, it occurs on coastal islands and in the southeastern corner and south-central part of the state (Baron 1982, Jones and Carter 1989). Isolated populations occur in many areas of Louisiana (Lowery 1974, Mayer and Brisbin 1991), eastern Texas (Davis and Schmidly 1994), and southeastern Oklahoma (Caire et al. 1989, Mayer and Brisbin 1991). Populations are discontinuous in southern Arkansas (Sealander and Heidt 1990). There are feral pigs in Tennessee in the Blue Ridge (Henry and Conley 1972, Singer et al. 1981, Johnson et al. 1982), Cumberland Plateau, and along the Mississippi River (Rary et al. 1968, Lacki and Lancia 1986, Kennedy 1991, Linzey 1995). In Kentucky, they primarily occur in the southeastern corner of the state (Mayer and Brisbin 1991, Whitaker and Hamilton 1998).

ABUNDANCE STATUS

There are few estimates of feral pig populations in the South. An estimated 1500 pigs roam the Cherokee National Forest and adjacent lands; there are approximately 800 individuals in the Great Smoky National Park (Whitaker and Hamilton 1998). It is estimated that 800 inhabit western North Carolina where 100 are taken annually by hunters. In Kentucky, an estimated 300 are found in the Cumberland Plateau (Whitaker and Hamilton 1998). In Texas, there have been recorded densities of 9.5/km^2 (Ilse and Hellgren 1995). Home ranges of 123–799 ha have been reported; however, the ranges of sows during the farrowing period averaged between 17–30 ha (Whitaker and Hamilton 1998). According to a survey conducted by the Southeastern Cooperative Wildlife Disease Study (SCWDS 1988), most states in the region have scattered populations of feral pigs with densities greater than 3.9/km^2. Landscape pattern (i.e., degree of fragmentation) may be a determinant of feral pig abundance in patchy landscapes (Virgos 2002).

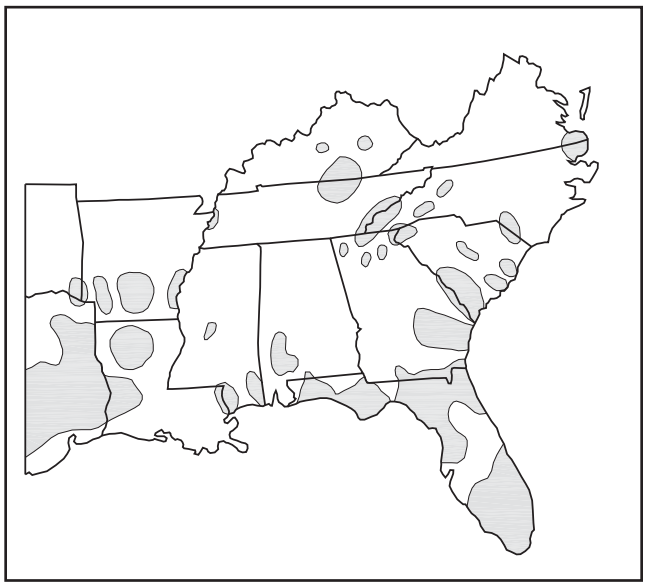

Figure 2. Distribution of *Sus scrofa* in the South.

PRIMARY HABITATS

In the South, the pig occurs in a variety of habitat types including bottomland forests, brushlands, dry ridges, swamps, and marshes. In mountain habitats, feral pigs use mixed hardwood forests associated with a permanent water source (Lacki and Lancia 1986). In Texas, preferred habitat is open brush-savanna (Ilse and Hellgren 1995). The pig requires adequate cover, both for protection from disturbance and to help reduce heat loss (Whitaker and Hamilton 1998). Seasonal changes in habitat use are related to food availability and dietary shifts (Dickson et al. 2001).

REPRODUCTION

The species matures at an early age and breeds throughout the year (Sweeney et al. 1979). In Tennessee and South Carolina, young are born during January–February and May–June (Henry 1966, Sweeney et al. 1979, Warren and Ford 1997, Taylor et al. 1998). At farrowing time, the female prepares a nest of vegetation (e. g., pine straw and broom sedge) within a shallow depression. The gestation period averages 112–115 days (Whitaker and Hamilton 1998); litter size ranges from 1–16 with a mean between 5–6 (Dickson et al. 2001). Reproductive success is influenced by food availability, particularly annual mast crops. The piglets remain with the sow until they

weigh approximately 25–35 kg (Kurz and Marchinton 1972). Males usually reach puberty within 5–7 months; females attain puberty at 10 months (Sweeney et al. 1979). The pig reaches full growth at 5–6 years of age.

FOOD HABITS

Sus scrofa is an opportunistic species (Henry and Conley 1972, Wood and Roark 1980, Warren and Ford 1997). In South Carolina, grasses and other herbaceous material represent 51% of the diet in spring and 9.5–35.8% during other seasons (Roark 1977). Fruits (e.g., berries) are an important component of the summer and fall diet; acorns and hickory nuts are important foods during fall and winter. Stems, leaves, roots, tubers, forbs, and mushrooms are also consumed. Insect larvae, snails, centipedes, and earthworms are included in the diet. Other components include reptiles, birds, small mammals, crustaceans, and the eggs of ground nesting birds such as ruffed grouse (*Bonasa umbellus*), wild turkey (*Meleagris gallopavo*), and northern bobwhite (*Colinus virginianus*). Carrion is also consumed (Roark 1977). On coastal islands, the species will consume the eggs and hatchlings of loggerhead (*Caretta caretta*) and green sea (*Chelonia mydas*) turtles. The pig will prey on newborn lambs, kids, and calves as well as adult sheep and goats (Dickson et al. 2001). The opportunistic food habits of this species often result in the depredation of a variety of commercial grain and vegetable crops.

ASSOCIATED SPECIES

The feral pig competes for mast foods with white-tailed deer (*Odocoileus virginianus*) and several other species of native wildlife (Wood and Lynn 1977). The species may out-compete the sympatric peccary, resulting in declines of density, herd size, and home range of the peccary (Ilse and Hellgren 1995, Gabor and Hellgren 2000). The pig is preyed upon by American alligator (*Alligator mississippiensis*), bobcat (*Lynx rufus*), American black bear (*Ursus americanus*), coyote (*Canis latrans*), and Florida panther (*Puma concolor*; Maehr et al. 1990).

VULNERABILITY AND THREATS

The feral pig is in no danger of extirpation in the region. In many states, the species can be hunted throughout the year on private land (Mayer and Brisbin 1991). In some national parks, natural areas, and other public lands, active removal programs have been implemented to reduce feral pig populations. Additional research is needed on the competitive relationship between the pig and the native species occurring in its habitat.

MANAGEMENT SUGGESTIONS

Management of the feral pig centers on long-term control programs aimed at reducing population size. The species is very prolific and becomes wary with hunting pressure; once populations are established, they are difficult to control (Dickson et al. 2001). Control techniques include fencing, snares, trapping, shooting, and hunting with dogs. Feral pigs can cause extensive environmental degradation (Bratton et al. 1982, Lacki and Lancia 1986, Lipscomb 1989). Many agencies consider the species to be a serious economic pest due to its feeding habits (depredation on agricultural crops and forest plantations) and behavior. Wallowing can degrade water quality via siltation and contamination of riparian streams. Rooting may cause environmental damage in areas where these animals occur, resulting in disruption of soil surface (erosion and destabilization) and damage to vegetation (tree roots, sprouts, and sensitive communities). Because of these problems, further reintroduction of the feral pig into new areas is not recommended (Dickson et al. 2001).

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