

Least Shrew

Cryptotis parva (Say, 1823)

Joshua Laerm, Brian R. Chapman, W. Mark Ford

CONTENT AND TAXONOMIC COMMENTS

The least shrew (*Cryptotis parva*) is distributed widely across the eastern United States. Only two of the nine recognized subspecies occur in the region (Whitaker 1974). *Cryptotis p. parva* is widespread in the region. *Cryptotis p. floridana* once was considered to be restricted to Florida (Whitaker 1974), but Handley and Varn (1994) suggest that populations extend along the Coastal Plain as far north as North Carolina. These coastal populations may represent a distinct species (Hutterer 1993). Choate (1970) revised the Middle American taxa of *Cryptotis*. The literature was reviewed by Whitaker (1974).

DISTINGUISHING CHARACTERISTICS

The least shrew is a small, short-tailed soricid with a long, pointed snout. Measurements are: total length, 70–92 mm; tail, 12–26 mm; hind foot, 9–13 mm; and weight, 3–6 g. This shrew has small ears concealed in the pelage and minute eyes. The pelage color is gray to brown dorsally, often with silver frosting, and light gray ventrally, with a distinctly short tail that is bicolored, dark above and light below. The skull of the least shrew is characterized by having only four upper unicuspid. Because the fourth unicuspid is tiny and difficult to see, the tooth row must be examined carefully. Specimens of the least shrew may be confused with small individuals in the genus *Blarina*, although specimens of *Blarina* have more uniformly lead-colored fur, five upper unicuspid, and are larger in size. The dental formula of the least shrew is: I 3/1, C 1/1, P 2/1, M 3/3 = 30 (Figure 1). See keys for additional details.

CONSERVATION STATUS

The least shrew has a global rank of Secure (NatureServe 2007). It is Secure in Alabama, Georgia, Kentucky, North Carolina, Oklahoma, Tennessee, and Virginia. Arkansas, Louisiana, and Texas classify the shrew as Apparently Secure. It is unranked in Florida, Mississippi, and South Carolina.

DISTRIBUTION

The least shrew is distributed from the Great Lakes south and west to the Great Plains and south into Central America to Panama (Hall 1981). Figure 2

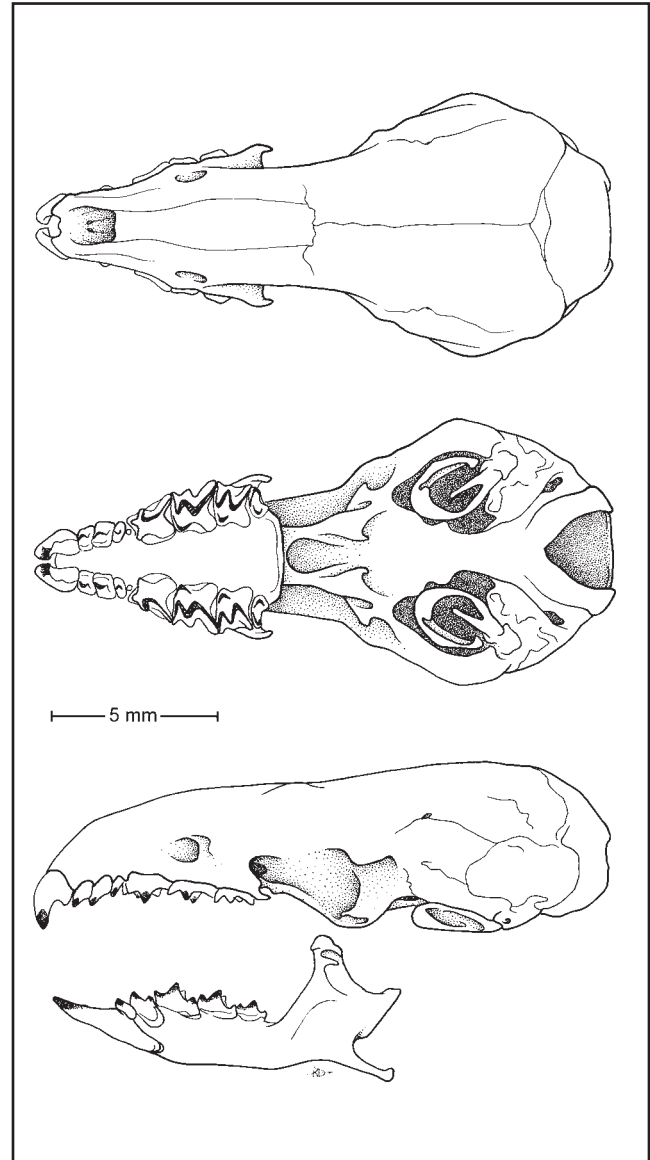


Figure 1. Dorsal, ventral, and lateral view of cranium and lateral view of mandible of *Cryptotis parva* from Wakulla County, Florida (USNM 527294, male).

depicts the distribution of the least shrew in the South. It occurs throughout Virginia (Jackson et al. 1976, Handley 1979, Cranford and Maly 1990, Pagels 1991, Pagels et al. 1992, Linzey 1998), North Carolina (Lee et al. 1982, Clark et al. 1985, Webster 1988, Laerm et al. 1995, Mitchell et al. 1995), South Carolina (Sherman 1937, Golley 1966, Mengak et al. 1987, Cothran et al. 1991, Handley and Varn 1994), Georgia

(Harper 1927, Neuhauser and Baker 1974, Wharton et al. 1981, Laerm et al. 1982, Ford et al. 1994, Laerm et al. 1995, Ford et al. 1997, Cochran et al. 1999, Laerm et al. 1999a,b), Florida (Hamilton 1941, Moore 1943, Moore 1946, Quay 1949, Pournelle 1950, Ivey 1959, Layne 1974, Whitaker 1974), Alabama (Dusi 1959, Holliman 1963, Wolfe and Rodgers 1969, Laerm et al. 1995), Mississippi (Wolfe 1971, Kennedy et al. 1974, Wolfe and Esher 1981, Jones and Carter 1989), Tennessee (Howell 1954, Howell and Conaway 1952, Smith et al. 1974, Copeland and Caldwell 1991, Kennedy 1991, Harvey et al. 1992, Feldhamer et al. 1993, Linzey 1995), Kentucky (Welter and Sollberger 1939, Fassler 1974, Rose and Seegert 1982, Bryan 1991, Feldhamer et al. 1993), Arkansas (Garland and Heidt 1989, Sealander and Heidt 1990), Texas (Davis 1940, Schmidly 1983, Davis and Schmidly 1994), and Oklahoma (Caire et al. 1989). In Louisiana, it is absent from the coastal marshes in the southeastern portion of the state (Lowery 1974).

ABUNDANCE STATUS

Little information is available on population densities and dynamics of the least shrew, presumably because of difficulty in collection (Whitaker 1974). Getz (1962) indicated that the least shrew had a "spotty" distribution and was not particularly abundant in any location. Estimated densities range from 1.7–4.9 individuals/ha (Howell 1954, Kurta 1995) to over 25 individuals/ha (Hoffmeister and Mohr 1957, Kale 1972). This species may be more abundant than trapping records indicate because its skulls often are found in owl pellets (Davis 1938, Davis 1940, Lowery 1974, Whitaker 1974, Mumford and Whitaker 1982, Hoffmeister 1989, Copeland and Caldwell 1991).

PRIMARY HABITATS

Although it may be present in various seral stages, the least shrew most commonly is associated with oldfield and early successional habitats including grassy, weedy, and brushy fields (Hamilton 1934, Davis and Joeris 1945, Howell 1954, Whitaker 1974, Wolfe and Esher 1981, Bryan 1991, Pagels et al. 1992, Feldhamer et al. 1993, Handley and Varn 1994, Cochran et al. 1999, Bellows et al. 2001, Ford et al. 2006). It also is reported from forested wetlands (Rose and Seegart 1982, Mitchell et al. 1993), coastal islands (Schacher and Pelton 1979, Webster 1988, Laerm et al. 1999a), and brackish tidal salt marshes (Cranford and Maly 1990, Martin et al. 1991), though it apparently is absent from the interior Everglades and mangrove swamps (*Avicennia germinans*-*Rhizophora mangle*). The least shrew generally is absent or rare in mature hardwood and coniferous forests at middle to higher elevations in the southern Appalachians (Laerm et al.

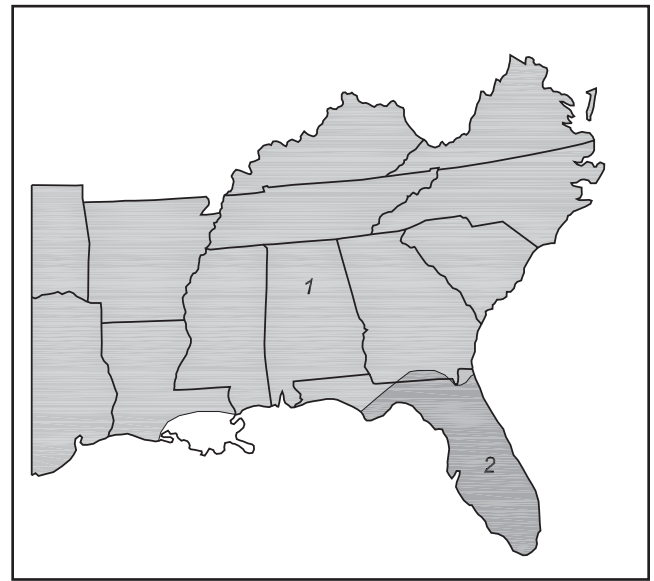


Figure 2. Distribution of *Cryptotis parva* in the South: (1) *C. p. parva*; (2) *C. p. floridana*.

1995, Ford et al. 1997, Laerm et al. 1999a,b; Ford et al. 2006). Although Whitaker (1974) noted that the least shrew was unknown above 905 m in the United States, Pagels (1991) reported it from a red spruce (*Picea rubens*) forest at 1,534 m on Mount Rogers in Grayson County, Virginia. The least shrew constructs burrows or utilizes those of other small mammals under logs, rocks, stumps, and other debris, where it constructs small (5–15 cm diameter) nests of dried grasses and shredded leaves (Smith 1938).

REPRODUCTION

Most breeding activities of the least shrew in the region probably occur between February and November (Hamilton 1944, Davis and Joeris 1945, Whitaker 1974), but some reproduction may occur at other times during the year. Conaway (1958) and Mock (1982) report that the gestation period is between 21–23 days. The litter size is 3–7 with a mean of 4.7 (Whitaker 1974). Adult size is reached at 30–40 days of age, and maximum longevity is approximately 21 months.

FOOD HABITS

The least shrew feeds on many kinds of invertebrates including annelids, gastropods, arachnids, chilopods, orthopterans, and lepidoptera and coleoptera larvae. It also eats small quantities of fungi and some green plant material (Hamilton 1944, Moore 1943, Whitaker 1974, Mumford and Whitaker 1982).

ASSOCIATED SPECIES

Because of its wide distribution, the least shrew may be found in association with nearly all of the mammals

in the region. It commonly occupies habitats with other soricids including the southern short-tailed shrew (*B. carolinensis*), Elliot's short-tailed shrew (*B. hylophaga*), and southeastern shrew (*Sorex longirostris*) in the Coastal Plain, Ozark and Ouachita Highlands and Cross Timbers. It also shares habitat with rodents such as the marsh rice rat (*Oryzomys palustris*), hispid cotton rat (*Sigmodon hispidus*), white-footed mouse (*Peromyscus leucopus*), cotton mouse (*P. gossypinus*), meadow vole (*Microtus pennsylvanicus*) and woodland vole (*M. pinetorum*).

VULNERABILITY AND THREATS

None.

MANAGEMENT SUGGESTIONS

The habitat of the least shrew is favored by the maintenance of oldfield and early successional habitats such as young pine (*Pinus* spp.) plantations prior to canopy closure (Atkeson and Johnson 1979, Yates et al. 1997). How the least shrew responds to site preparation intensity and herbaceous control in the South requires further investigation.

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