

DETECTING THE PRESENCE OF EUROPEAN WILD HOGS

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ABSTRACT

Three basic characteristics that distinguish European hogs (*Sus scrofa*) from domestic swine are discussed. These characteristics are: striped pelage of young (dark stripe along back and six light brown and five black stripes on each side of the body); guard hairs of adult animals split at the end into several parts; and thirty-six chromosomes as compared to 38 for domestic swine.

European wild hogs were introduced into the southern Appalachians in 1912 (Jones 1959). They have also been introduced into California and New Hampshire and are common on shooting preserves throughout the United States. Feral domestic swine were also present in the North Carolina-Tennessee area where the European hogs were introduced and substantial numbers of feral swine exist in most of the southeastern states. It is suspected that European hogs are present in the wild swine populations of many of the southeastern states in addition to North Carolina and Tennessee. The probable presence of European hogs in these wild swine herds is believed to be the result of introduction by private individuals rather than dispersal from the original release site. The purpose of this paper is to notify field workers of various methods of detecting the presence of European hogs in wild hog populations.

The differences between European and domestic hogs listed in this paper were determined by a review of literature on domestic and European hogs and by an eight-year study of European hogs on the Tellico Wildlife Management Area in Tennessee. During this study 885 hogs killed by hunters, 451 hogs initially trapped, 936 hogs recaptured, 540 pen-reared piglets at birth and 93 adult pen-reared hogs were examined. The pelage of an estimated 7.5% of the wild animals was spotted. All remaining hogs examined had the pelage characteristics listed in this paper as features of European hogs.

There are numerous anatomical differences between European and domestic hogs, but these features are not readily discernible, especially when European and domestic stock are subjected to the same environmental conditions. In general, European hogs are more streamlined than domestic hogs and are thicker and higher in the shoulder region than in the hips. Disregarding gross anatomy, there are three basic differences between European and domestic hogs. These differences are:

(1) pelage color of young, (2) adult pelage and (3) chromosomes.



Fig. 1. Sow and striped pigs of the European wild hog.

Pigs at birth are striped in a pattern similar to chipmunks with longitudinal stripes of light brown and black alternating (Fig. 1). The basic color at birth is light brown, the belly is buff colored, and a tuft of hair is present under the chin. On each side of the body there are six light brown and five black stripes. There is a broad stripe along the entire length of the spine that is black in color from the head to slightly over one-half of the back and brownish-black from this point to the tail. This broad back stripe remains after the others have disappeared. At two months the stripes are fading and by four months they have disappeared. None of the domestic breeds produce pigs with striped pelage although the pigs of most wild species of the genus *Sus* are striped. Adult European hogs are solid colored, the color varying from light gray to dark black.

The pelage of adult European hogs consists of long, stiff guard hairs that are split at the end into several parts (Fig. 2). The guard hairs of domestic hogs are not split. These guard hairs of European hogs form a pronounced mane of bristles along the spine from the head to the hip region. This mane accentuates the heavy shoulders mentioned previously. The guard hairs are undercoated in winter by fine wool which is shed in the summer.

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Fig. 2. Split guard hairs of European wild hogs.

The normal chromosomal complement of the European wild hog is different from that of the domestic hog (McFee *et al.* 1966) even though European hogs are the ancestors of domestic swine and both are con-

sidered to be the same species. The difference is that cells of the European hog have 36 chromosomes as compared to 38 for domestic breeds. Crosses between the European wild and domestic swine produce fertile offspring with a chromosome number of 37. A study of the cytogenetics of the hog population on the Tellico Wildlife Management Area was made by Rary *et al.* 1968 and techniques for obtaining chromosome counts were described for the study. Sixty of 65 wild swine with 37 chromosomes retained the pelage characteristics of European hogs. The ancestry of swine populations can be estimated using these chromosome counts.

LITERATURE CITED

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