The Possible Role of Scent in Behavior

Whenever scent glands in mammals have been studied they have been found to play an important role in social behavior, especially territoriality and dominance (Thiessen, et al, 1974; Muller-Schwarze, et al., 1974; Ralls, 1971). This aspect of behavior is very difficult to study and was not among the main objectives of my work; however, I do have some observations to record.

I noticed that the ventral cream-colored fur of many Glaucomys was often spotted with cinnamon brown in the throat and pectoral region. Adult females had especially large, deeply colored spots in the mid-ventral pectoral and throat area and additional spotting on the belly. It appears that this coloration may be caused by a skin secretion. Occasionally the "staining" of the fur appears to spread outward from the spots resulting in an overall orange-buffy coloration of the ventral fur. Under ultraviolet light the stained fur glows a deep rose-pink, unlike the violet tinge of the fur of animals without cinnamon spotting. Squirrels in some seasons did not have the spotting. Spots were usually noticed shortly before and during breeding seasons. In 1975, when no breeding occurred in the spring, all animals had unspotted cream-colored ventral fur until mid-May, when animals of both sexes had small spots scattered on the chest and belly. By the time the females were in estrus the first week in July, the females had dark cinnamon throat patches and the males had small spots on the belly and sometimes on the jaw below the corners of the mouth. In the previous year, when breeding did occur in the late winter, deep brown spots were apparent by early April, and perhaps

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THE BEHAVIORAL ECOLOGY OF THE SOUTHERN FLYING SQUIRREL,

GLAUCOMYS VOLANS, ON LONG ISLAND, NEW YORK

by

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