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## CHRONIC DERMATITIS IN NUTRIA IN LOUISIANA

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*Abstract:* Chronic dermatitis in nutria (*Myocastor coypus*) in Louisiana was traced to secondary bacterial and fungal infection resulting from the penetration of achene awns of smooth beggartick (*Bidens laevis*) into the skin.

### CASE REPORT

Reports from fur animal trappers in Louisiana of lesions on nutria (*Myocastor coypus*) resulting in or initiating damage to the pelts prompted an examination of infected animals. On 27 February 1974, a visit was made to the Salvador Wildlife Management Area (WMA) in southeastern Louisiana, origin of several of the reports. The area is situated 32 km southwest of New Orleans in a freshwater marsh and contains a high population of these rodents. Numerous nutria were observed on small resting platforms scattered throughout the marsh and 5 animals were collected. Two nutria contained lesions on the ventral portion of the body, in the neck and chest regions, and upper portion of the front legs.

A closer examination disclosed loss of epidermis in many areas of the skin as a result of necrosis. In affected areas, the surface was covered by necrotic debris containing numerous inflammatory cells along with colonies of bacteria and groups of fungal hyphae. The skin was extremely thickened because of proliferation of connective tissue in the dermis and the infiltration of inflammatory cells. Numerous thorn-like structures containing small barbs also were present and had penetrated deeply into the dermis. The structures were surrounded by neutrophils and appeared to

be the initial source of lesions with bacterial and fungal infections as secondary sources.

The barbed thorn-like structures were identified as awns of the achenes of smooth beggartick (*Bidens laevis*). Several complete achenes were found on the nutria with awns attached and penetrating the skin. Awns are usually paired, each containing 2 rows of retrorse barbs, and serve as a means of attachment to animals for achene dissemination. Smooth beggartick is a common plant on Salvador WMA and dies back during late fall, after the achenes have matured. The marsh usually becomes inundated during the winter and nutria collect dead stems of this plant for use in construction of resting platforms. Many mature achenes remain attached to the dead stems, come in direct contact with nutria on the platforms, and initiate the chronic dermatitis.

Nutria are extremely sensitive to foreign bodies and conditions similar to those reported herein were noted by Evans *et al.*<sup>2</sup> during tagging and marking studies. Tags, collars, or other devices attached to the animals soon produced infection.

Trappers received an average price of \$4.50 for dried nutria pelts during the 1974-75 season.<sup>3</sup> Lesions caused by the awns weaken nutria skin, often causing it to tear during the skinning process. If

skins are successfully removed from affected animals, the lesions often occur as holes in the dried pelt, reducing the value as much as 75%.

Smooth beggartick is restricted to freshwater marshes in Louisiana and in only a few locations do sizable communities of the plant occur. Studies in 1968 disclosed that this species made up less than 0.1% of the total species composition of the freshwater marsh.<sup>1</sup> However, in most areas where dense stands occur, chronic dermatitis in nutria has been reported and complaints are becoming more numerous each year.

Smooth beggartick is a pioneer plant and will invade sites where succession has retrogressed. The dominant species

in the freshwater marshes is maidencane (*Panicum hemitomon*);<sup>1</sup> however, large die-offs of maidencane, as a result of excessive flooding, have taken place since 1973. Should smooth beggartick invade the areas formerly occupied by maidencane or other species, the problem of chronic dermatitis in nutria would increase. Habitat potentially suitable for smooth beggartick in southeastern Louisiana includes about 160,000 ha with an annual nutria harvest of approximately 250,000.

Future studies are needed to determine the present distribution of smooth beggartick and the factors affecting local abundance. Also, methods of control of the plant should be investigated.

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