

# NOTES AND LETTERS

## OAK-FEEDING INSECTS IN SASKATCHEWAN

The stands of Bur Oak in eastern Saskatchewan provide habitat for unique species of insects. The following is a list of some Saskatchewan insects that feed on different parts of the oak trees themselves and whose populations in the province are restricted to the oak-growing areas in the southeast.

### ON THE LEAVES:

Butterflies (caterpillars) – Edwards' Hairstreak (*Satyrium edwardsii*), Banded Hairstreak (*Satyrium calanus*), Sleepy Duskywing (*Erynnis brizo*), and Juvenal's Duskywing (*Erynnis juvenalis*).

Moths (caterpillars) – White-headed Prominent (*Symmerista albifrons*), Oak-devouring Moth (*Symmerista canicosta*) and Oak Leaf Roller (*Agryrotaenia quercifoliana*).

### IN THE TRUNKS:

Beetles – Long-horned Beetle (*Purpuricenus humeralis*) and Metallic Wood-borer (*Chrysobothris rugosiceps*).

### ON THE ACORNS:

Beetle – Nut Weevil (*Curculio strictus*) and a blastobasid moth, *Valentinia glandulella*, whose larvae live inside acorns hollowed out by acorn weevils.

### UNDER THE BARK:

Beetle – Bark Weevil (*Magdalis barbata*).

### ON THE SAP:

Bugs – Tree Hoppers (*Cyrtolobus helena*, *Cyrtolobus muticus*, *Cyrtolobus ovatus*, *Telamona spreta*, *Telamona molaris*, *Telamona monticola*, *Glossonotus univittatus*).

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## DISCOVERY OF A "LOST" SPECIMEN OF THE AMERICAN WATER SHREW FROM CHURCHILL, MB



*American Water Shrew*

*Donald L. Rubbelke*

The only record of the American Water Shrew (*Sorex palustris*) from Churchill, Manitoba, is a specimen taken by Mrs. I. H. Smith of Churchill on 20 October 1953.<sup>7</sup> The specimen was preserved in alcohol and deposited in the exhibits collection of the Department of Zoology, University of Manitoba (later named the Stewart-Hay Memorial Museum), where it was identified by Donald A. Smith.<sup>7</sup> Collected at the edge of the coastal tundra (58° 43'N, 94° 07'W), this record was 370 km farther north than previous reports of the American Water Shrew (hereafter referred to as water shrew) in Manitoba.<sup>11</sup>

The northern limit of the water shrew's range in Manitoba has been defined by many

writers based in part on the Churchill specimen.<sup>1,2,4,9</sup> For example, in the first volume of the *Handbook of Canadian Mammals*, C.G. van Zyll de Jong included this record in the species account for the water shrew<sup>8</sup>, although he did not examine the specimen (Michel Gosselin, pers. comm.). As well, R.E. Wrigley included the water shrew, on the basis of this record, in a diagram illustrating the zonation of small mammals in relation to vegetation and topography in the Churchill-Seal River region.<sup>10</sup>

By the mid-1970s, this specimen could not be located and was assumed to be lost.<sup>11</sup> I found it while examining mammals in storage in the Stewart-Hay Museum. The fluid in which the specimen (catalogue number 115, mammals) had been preserved had evaporated; however, the identification of the desiccated and faded specimen was readily confirmed. The original label accompanies the specimen, but there are no measurements and the sex was not determined. The specimen is now housed in the vertebrate collections of the Manitoba Museum of Man and Nature (MMMN no. 22006).

This remains the only record of the water shrew from the immediate vicinity of Churchill. There are no specimens in the collection of the Churchill Northern Studies Centre (M.A. Goodyear, pers. comm.), and Paul Watts (pers. comm.), biologist and longtime resident of the Churchill area, has not encountered this species there. In 1973, water shrews were not among the small mammals collected by Wrigley and co-workers near Seal River (59° 04'N, 94° 47'W), on the west coast of Hudson Bay, 56 km northwest of Churchill, nor near Churchill.<sup>10</sup>

Specimens collected in the 1970s by Wrigley and collaborators extended the known range of the water shrew north and west of Churchill.<sup>11</sup> One of these specimens (MMMN 6116) was taken on 4 August 1975

at Little Duck Lake (59° 29'N, 98° 34'W), 225 km northwest of Churchill at the edge of the barren grounds and 450 km north of previous records.<sup>11</sup> From 16 to 26 July 1979, Wrigley (pers. comm) trapped three species of shrews but no water shrews at York Factory (57° 00' N, 92° 18' W). In 1982, two specimens (MMMN 13885, 13886) were taken on 8 July by J.E. Dubois and G.E. Lammers, 42 km northeast of York Factory, at the mouth of Opoyastin Creek (57° 07'N, 91° 39'W), near the coast of Hudson Bay. Ongoing surveys of small mammals in Wapusk National Park (57° 46' N, 93° 22' W), 35 km southeast of Churchill have not revealed the water shrew (J.E. Dubois, pers. comm.).

Given the paucity of specimens of the water shrew, additional documentation is needed from localities in northern Manitoba to determine the distribution and status along the northern edge of the range. Specimens collected recently in Alaska and the Yukon Territory not only extended the documented range north of previous records, but also suggest that water shrews are more widely distributed than was believed previously.<sup>3,5,6</sup>

### Acknowledgements

J. E. Dubois and Janis Klapecki (Manitoba Museum of Man and Nature) provided much information and permitted me to examine specimens under their care. Michael Goodyear (Churchill Northern Studies Centre), Michel Gosselin (Canadian Museum of Nature), Paul Watts (Institute of Applied Ecology and Physiology) and Susan Woodward (Royal Ontario Museum) searched their databases or field notes for specimens or records of water shrews from Churchill and elsewhere in northern Manitoba. J. E. Dubois and R. E. Wrigley commented on the manuscript, and the latter brought his 1974 paper to my attention. Considerable thanks go to Donald L. Rubbelke (Lakeland Community College, Kirkland, Ohio), for providing the photograph of the American Water Shrew, an intriguing and beautiful mammal.

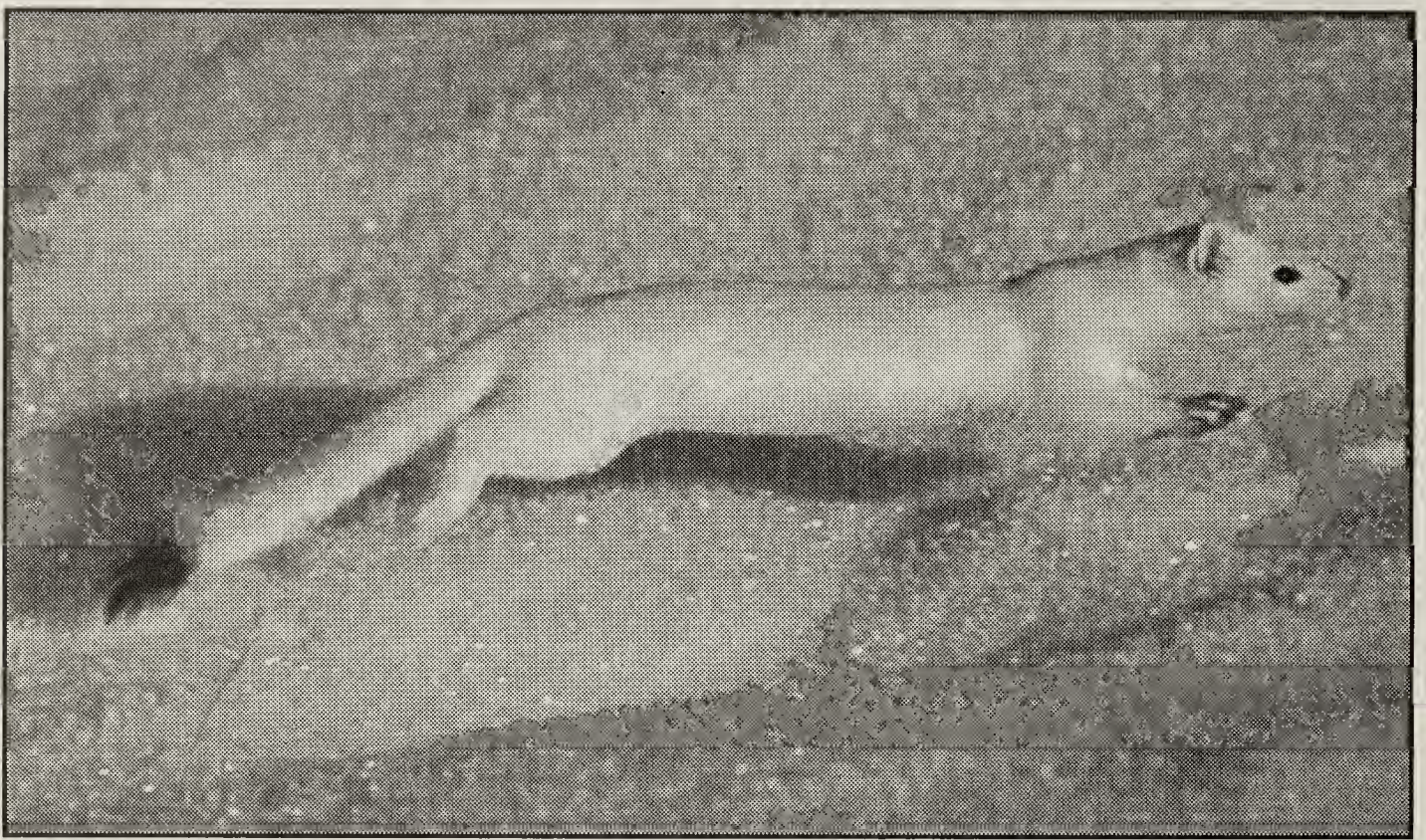
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## DEFENSIVE BEHAVIOURS OF LONG-TAILED WEASELS

Weasels that have turned white before the snow comes are conspicuous, especially if they venture out during the day. In late November 2001, while walking along quietly on snow-free ground, I spotted two weasels; one on open grassland near Beaverhills Lake in central Alberta, the other on the sparsely treed banks of the North Saskatchewan River east of Edmonton. Their size identified them as Long-tailed Weasels. Alarmed by my approach, they darted away to safety. The first one disappeared into a burrow, the second climbed a willow tree.

The grounded weasel emerged again very soon, craning its neck out of the hole to watch me, while I stood quite still 12-15 m away. After a while, the animal apparently wanted to move on, for it suddenly raced off, but it got no farther than 2-3 m and abruptly turned back to its hole. It did this 5 or 6 times at intervals of a few minutes. Curiously, at each lightning-quick turn around, the weasel jumped up vertically, clearing the ground by some 70-80 cm. Eventually, it gained enough courage to complete its departure, streaking away 10-12 m and dropping out of sight into another burrow that it evidently knew to be there. I walked closer and watched the animal briefly, while it poked its head up and chattered angrily.

The weasel's false starts reminded me of a ball player trying to steal a base. However, the most remarkable aspect of its deceptive take-offs were the high jumps at the turn around. This, in my view, is a defensive/aggressive tactic intended to inhibit an attacking owl or hawk from seizing the weasel. Similar high-jumping reactions were displayed by muskrats and jack rabbits that I saw attacked, respectively, by Bald Eagles and a Gyrfalcon.<sup>1</sup> The dodging tactics apparently worked well, for in each of four cases the intended victim eventually made



*Long-tailed Weasel*

*Gordon Court*

its escape or was let go. The aggressive/defensive routines of Muskrats may be well-known to other Blue Jay readers who have cornered a rat on dry land. If closely confronted by people, the animal lunges at you, which has the immediate effect that you back off in a hurry!

The second Long-tailed Weasel I saw last November ran to and quickly ascended a medium-sized willow tree, some 6 m away from me. It climbed to a branch about 3 m above the ground. When I approached a few steps, the weasel suddenly jumped down and streaked off to the next tree a few metres away, where I left it alone.

Tree-climbing by weasels is in my view an anti-predator reaction.<sup>2</sup> It is a well-known escape routine for cats, both wild and domestic. Also the Pine Marten and even, on occasion, the mink resort to trees when needed!<sup>2</sup> For prairie weasels, climbing trees may be especially significant as a way of escaping from Coyotes and Red Foxes, which tend to kill any weasel they can catch. The current status of the Long-tailed Weasel in Canada appears to be rare or uncommon, which may well be linked to the near ubiquitous presence of the wild canids.<sup>2</sup> No

doubt, other factors are involved as well, such as habitat fragmentation, lack of rodent prey and the resulting scarcity of ground burrows in which weasels can take refuge when needed.

I would be interested to hear from people who have actually seen hawks or owls swoop at weasels. Did they jump up in defense? Of course, if the raptor catches its prey by complete surprise, the weasel may not have had a chance to defend itself.

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## COUGAR PHOTOGRAPHED NEAR TREHERNE, MB

The status of the Cougar in Manitoba up to 1982 has been reviewed in depth and well summarized, including documentation of an actual specimen shot at Stead, 35 miles northeast of Winnipeg in December 1973.<sup>2,3</sup> Nevertheless, to our knowledge, a live, wild Cougar has not been photographed in Manitoba.

We live in south-central Manitoba, overlooking the Assiniboine River Valley, nine miles north of the village of Treherne. In the six years we have lived here, we have heard from neighbours a number of reports of Cougar sightings. We have personally encountered tracks we believe to be from Cougars, and have found two deer kills which appeared to have been the work of Cougars.

The first kill, a fork-horn White-tailed Deer, was found December 1996, about half a mile east of our home, in an area heavily

frequented by deer. Though snowfall had obscured any tracks, the frozen carcass lay partially consumed and abandoned, seeming to suggest that a Cougar had fed only once or twice. The skin on the back had been peeled like a banana, and most of the back had been eaten. The position of the head seemed to indicate a broken neck. We believe that this kill could not have been the work of coyotes, as in our experience, coyotes would have stripped the carcass to the bone in a matter of days.

The second kill, found on an early morning in June 2000 on the northern edge of our prairie, less than a quarter mile from our home, consisted of the hindquarters of a good sized white-tail fawn, severed across the small of the back. The exposed flesh was clean and fresh. We speculated that we had disturbed the predator as we enjoyed our early morning walk. The method of disarticulation and the size of the hindquarters seemed to rule out a coyote. The fact that a neighbour had reported seeing a Cougar take a fawn the previous week



*Figure 1. Close-up of Leon Pewarchuk and the cardboard cutouts.*

*Doug Head*



*Figure 2. Leon Pewarchuk and the cardboard cutouts, close to the location of the cougar sighting.*  
*Doug Head*



*Figure 3. Doug Head's cougar photograph, slightly enlarged.*

about a mile east of us seemed to support our hypothesis.

In October 2001, we heard on the local grapevine that Doug and Pauline Head, who live two miles south of us, had not only seen a Cougar, but had also photographed it. With considerable excitement we contacted the Heads, who confirmed that Doug had taken a series of photographs of a Cougar in an alfalfa field south of their home late in the afternoon of October 27, 2001. Doug and Pauline had watched the Cougar for approximately half an hour as it apparently hunted small rodents in their alfalfa field. Doug photographed it several times during that period. The best photo, the last one taken, shows the animal on the edge of lengthening late-day shadows, just as it was disappearing behind some bushes (Fig. 3).

Doug loaned us this photo, copies of which we sent to, among others, Carol Scott, then Acting Director of the Wildlife Branch, and Robert Nero, longtime cataloguer of Cougar sightings in the province, now retired from the Wildlife Branch. Bob Nero told us that he believed it was a Cougar. He supported our observation of such diagnostic features as the long, black-tipped tail and the heavy hind limbs and hips, noting also the relatively small head. Some of his colleagues, however, were sceptical, mainly owing to the relatively poor resolution of the image and uncertainty about the size of the animal in relation to any measurable landmark. Some suggested that the animal in the photograph could be a farm cat.

Determined to resolve the uncertainty, Don made cardboard cutouts of a smallish Cougar and a regular-sized cat. The cardboard Cougar measured 64 inches in length, nose to tail, a length gleaned from Banfield.<sup>1</sup> The farm cat model measured 25" (Fig. 1). With the help of Doug Head and Leon Pewarchuk, we set up the cutouts in the alfalfa field, which was by this time snow-covered, in the general area, indicated by Doug, where the live Cougar had been. The measured distance between the

cutouts and the photographer was 93 yards (Fig. 2). We photographed the cardboard cutouts from the spot where Doug had stood, hoping to prove that the animal photographed in October was closer in size to the cardboard Cougar, and thus could not have been a farm cat.

Subsequently, Cindy Little, Wildlife Information Technologist for the Wildlife Branch, encouraged by Carol Scott, performed some computer manipulations of the two photographs, namely Doug Head's original Cougar photo and the photo of the cardboard cutouts. Once the two photos were coordinated and adjusted to correct perspective (based on a critically situated fence post), it became clear that the animal in the original photograph was closer in size to the cardboard Cougar. Based on this computer work, it is clear that Doug Head had, as he has patiently maintained all along, taken a photo of a Cougar, apparently the first photograph for the province.

#### Acknowledgements

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