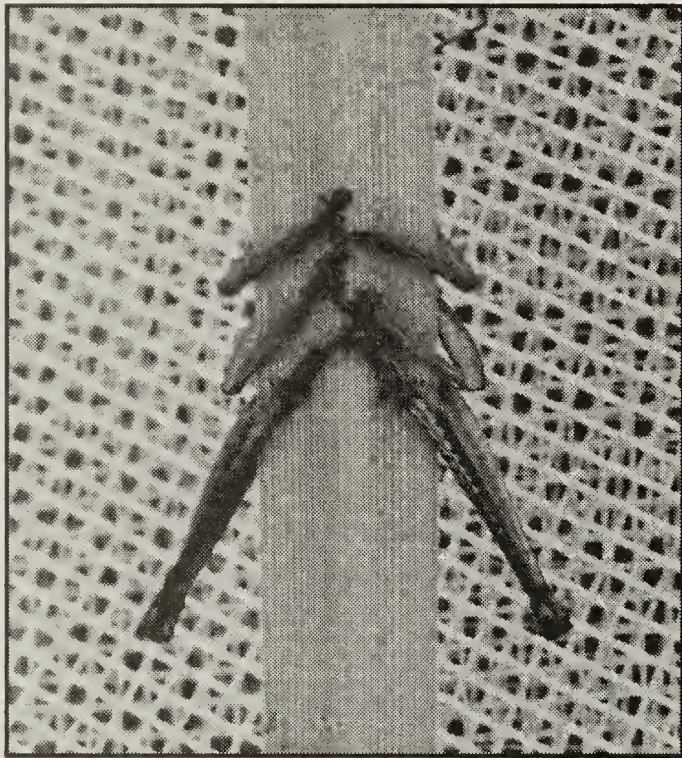


MYSTERY PHOTO

DECEMBER 2003 MYSTERY PHOTO

This immobile object on a blade of grass was photographed near Saskatoon on 6 August 2003. What is it?



Topi with "ear bone"

Ernie Kuyt

ANSWER TO SEPTEMBER 2003 MYSTERY PHOTO



Bowhead Whale "ear bone"

Ernie Kuyt

The photograph shows the "ear bone" of a Bowhead Whale (*Balaena mysticetus*). The ear bone consists of three bones fused together: mastoid process, bulla and petrosal bone. The petrosal bone is extremely dense and hard; it contains and protects the delicate

organs through which mammals hear sounds. In mammals other than whales, these bones are part of the skull. In whales, however, these bones have no bony attachment to the rest of the skull. Instead, they are attached only by soft tissue. This arrangement prevents sound waves from passing to the hearing apparatus from other parts of the body, and makes it possible for whales to hear directionally under water. Such directional hearing is essential to whales' ability to locate objects by echo-location, for example. Because of its loose attachment to the skull, the ear bone can easily be detached; most fossil whale skulls are missing the ear bone and many fossil ear bones have been found separate from other whale remains. Thanks to Ernie Kuyt for finding this bone and taking its photo.

Explanatory note by Ted Leighton