Dr. G. Wobeser, Department of Veterinary Pathology, University of Saskatchewan, Saskatoon, for examination. Initial examination conducted July 10 was followed by histopathological examination and the final report was submitted to me January 13, 1971. It stated that the tiger salamanders died from anoxia, lack of oxygen. The diagnosis supported my field observations of larval salamanders in a stressed condition surfacing for air on the morning of July 10.

Although dissolved oxygen was not measured, an oxygen deficiency probably occurred. For several days preceding the die-off, light winds, six to sixteen kilometers per hour (four to ten mph) and high water temperatures, 20 to 24°C, were recorded. These conditions tend to limit dissolved oxygen levels because oxygen mixing is minimal at low wind speeds and the solubility of oxygen in water drops with an increase in water temperature. These factors, coupled with the oxygen uptake of water milfoil and water starwort at night, provide conditions conducive to a serious reduction in oxygen levels.

Dead adults of *A. tigrinum* were noted at several other ponds within 1.6 kilometers (one mile) of the above mentioned pond the following week.

I wish to thank C. A. Matthews, Canadian Wildlife Service, and D. W. Matheson for their assistance with the field count.

# A CHECK-LIST OF ALGAE IN WASCANA LAKE

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It is well known that freshwater lakes undergo eutrophication, an aging process brought about by the interactions of a variety of physico-chemical and biological factors. Eutrophic lakes are characterized by a richness in nutrients and aquatic organisms such as algae; indeed in an extremely eutrophied lake one or a few species of algae may multiply to such a degree that virtually all other organisms are excluded. Such unusual abundance of one or a few algae in a lake is usually termed as an algal bloom and often results in the formation of surface scum such as that seen in Wascana and the Qu'Appelle lakes during the summer. When algal blooms are aesthetically or economically undesirable we commonly, although somewhat crudely, say that the lake is "polluted."

In some parts of Wascana lake a flagellate alga, *Euglena*, is known to form blooms and an account of this has already been published (*Blue Jay*, 28(1):50-53, 1970). An examination of water samples collected from different localities of Wascana Lake revealed a wide variety of algae, a few of which were abundant and tended to form blooms. To have a better understanding of the mechanisms of algal blooms and also of the inter-relationships between the algae that produce blooms and the ones that do not, an attempt was made to identify systematically the algal flora of Wascana Lake. Consequently, water samples were obtained twice weekly from selected localities of the lake during the months of July and August of 1970. Similar studies were made of water samples collected at irregular intervals from Wascana Lake in June, July, August and the early part of September of 1971. The check-list provided at the conclusion of this article includes all of the algal genera identified. The relative abundance of each genus is also indicated. No attempt was made, however, to identify their species. This check-list of the algae of Wascana Lake is given here with the hope that it will be useful in future investigations of algal blooms in Wascana Lake. Those algae that produce blooms will be discussed in a later article.

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LIST OF GENERA OF ALGAE IN WASCANA LAKE

| | |
|---|---|
| **Cyanophyta** (Blue-green Algae) | |
| *Anabaena* | *+++ |
| *Aphanizomenon* | +++ |
| *Aphanocapsa* | ++ |
| *Chroococcus* | + |
| *Glaucocystis* | R |
| *Marssoniella* | R |
| *Merismopedia* | + |
| *Microcystis* | +++ |
| *Nostoc* | R |
| *Oscillatoria* | + |
| *Phormidium* | R |
| *Spirulina* | R |
| **Chlorophyta** (Green Algae) | |
| *Acanthosphaera* | R |
| *Actinastrum* | R |
| *Ankistrodesmus* | + |
| *Chlamydomonas* | ++ |
| *Chlorella* | ++ |
| *Closteridium* | R |
| *Closterium* | + |
| *Coelastrum* | + |
| *Cosmarium* | ++ |
| *Euastrum* | + |
| *Enteromorpha* | + |
| *Franceia* | R |
| *Gonium* | R |
| *Golenkinia* | + |
| *Micractinium* | R |
| *Oedogonium* | R |
| *Pandorina* | + |
| *Pediastrum* | + |
| *Polyedriopsis* | R |
| *Protococcus* | R |
| *Pyrobotrys* | R |
| *Rhizoclonium* | +++ |
| *Scenedesmus* | +++ |
| *Selenastrum* | R |
| *Spirogyra* | +++ |
| *Staurastrum* | + |
| *Stigeoclonium* | R |
| **Chrysophyta** (Yellow-green and Golden-brown Algae) | |
| *Botrydiopsis* | + |
| *Chrysamoeba* | R |
| *Chrysidiastrum* | R |
| Diatoms | +++ |
| *Meringosphaera* | R |
| *Ophiocytium* | R |
| **Euglenophyta** (Euglenoids) | |
| *Euglena* | +++ |
| *Phacus* | R |
| *Trachelomonas* | R |
| **Chloromonadophyta** (Chloromonads) | |
| *Gonyostomum* | R |

* R(rare), + (present), ++ (present in every collection), +++ (abundant)

# WHAT IN THE WORLD?

In the September 1971 *Blue Jay* on page 144 we challenged you to identify an interesting capsulate fruit of a flowering plant. The fruit had been sent in to the Agricultural Research Station in Regina and Keith Best and your *Blue Jay* editor had fun speculating about what family it belonged to. Keith soon identified it as Devil's Claws or Unicorn Plant *(Proboscidea louisianica, Martynia louisiana* in some manuals of botany). I was curious to know whether any of our readers could recognize it from the photograph. The plant does not grow in Canada and I was completely unfamiliar with the family.

The fruit shown in the photograph had been sent in for identification but it had come to Canada in the tail of one of the 85 horses brought in from Colorado for sale at the Inwood Auction Market in Manitoba. It was said that there were "several of these objects in the tails of the horses." The identification was confirmed by the Plant Research Institute in Ottawa. (Incidentally, the photographic credit which I gave to Keith Best should have gone to Bill Fleming.)

Keith Best gave me the information that the plant grows mainly in Arizona, New Mexico and Texas rather than Colorado. The plant is low growing with wide-spreading branches to three feet in length. The leaves are heart-shaped at the base and 4-12 inches across. The flowers are *Gloxinia*-like, two inches long and creamy-white to light red or violet in color.