

# GIANT WATER BEETLES AT THE PAS, MANITOBA

WALTER KRIVDA, Box 864, The Pas, Manitoba. R9A 1K8

We have all seen large, black, shiny beetles under street lights at night. Some years they are common and in others almost absent. Some have a "zebra" pattern on their underside when they are lying upside-down as they often do. The females of some species have grooved backs, other females look like the males. For all their armour and ungainly looks, they are in fact good flyers, having flown out of some nearby water body — attracted by the street lights.

There seems to be two peak periods in the year when they are common in The Pas area — spring and autumn. They are rarely found in midsummer. The spring flight is rather early — towards the end of April; the autumn flight occurs in September-October.

I have collected water beetles here for 30 years now. There may be perhaps a half dozen species here. Many look alike and casual separation of one kind from another is difficult. From the dated specimens taken year after year, the two peak periods can easily be seen.

As mentioned above, abundance is variable. They are never really rare or scarce but can become uncommon some years. The weather may be a limiting factor. I have picked specimens out of the snow some springs and they will freeze solid in ice and revive later, evidently unharmed!

With the recent advent of mercury vapour street lights in The Pas area, insects now come to lights in greater numbers than formerly. They fall on the streets and are crushed in great numbers by the passing traffic. This may have long range effects on insect populations themselves and also on the predators that feed on them.

To get an idea of the numbers of the giant water beetles attracted to light, an effort was made one night to pick up all that could be found. We waited until a

good flight started. This first occurred on 26 April 1981 and continued over the 27 - 28 April. Whether the population dropped after this due to weather or due to the fact that great numbers were killed by the traffic is open to question.

On the night of 28 April with the temperature just above freezing, Fred Madrigga and I, with the assistance of six children began to collect in the Otineka Mall Parking Lot at 8:00 p.m. and continued to pick up all the specimens we could find until 11:00 p.m. By this time, the temperature had fallen so that we could all see our breaths and our hands were cold from collecting! The specimens were collected into jars of 70% iso-propyl alcohol. They were stored in quart jars with tight lids on, to prevent alcohol evaporation for some weeks. The alcohol was replaced several times as it turned brown due to dissolving fats from the specimens. In July all were pinned out, labelled and added to the insect collections.

This mass collection of 446 specimens will now be studied and attempts made to identify the species involved and the sex ratios. Comparisons will also be made with previous series collected in The Pas area. Hopefully the results of this study will be published in a future issue of the *Blue Jay*.

EDITOR'S NOTE — These beetles are of the genus *Dytiscus* of the family Dytiscidae. They are commonly called Predaceous Diving Beetles. Seven species are found in Manitoba — *Dytiscus fasciventris* (Say); *Dytiscus hybridus* (Aube); *Dytiscus cordieri* (Aube); *Dytiscus harrisii* (Kirby); *Dytiscus circumcinctus* (Ahrens); *Dytiscus dauricus* (Gebler); and *Dytiscus alaskanus* (Balfour-Browne). All of these are found in Saskatchewan, plus an additional species, *Dytiscus marginicollis* (LeConte) near the Alberta border. — R.R. Hooper