

curring over most of southeastern Canada and the eastern United States. Few are seen in the open, but individuals may often be collected under boards, stones and similar cover.

Logier and Toner (1961, p. 64) record the species from Crooked Lake, Grenfell, Hazelcliffe and Langenburg on the basis of specimens in the Saskatchewan Museum of Natural History and the University of Saskatchewan collection.

The Green Snake is bright green above and white or yellowish below. It is only slightly larger than the Red-bellied Snake, rarely reaching two feet in total length. Saskatchewan specimens vary from eleven to sixteen inches.

Two subspecies are recognized, an eastern form, *Opheodrys vernalis vernalis*, which has 130 or fewer ventral scales in males, 139 or fewer in females; and a western form, *Opheodrys vernalis blanchardi* which has a higher ventral scale count. Saskatchewan individuals examined had counts of 129 and 130 for males and 136, 138 and 142 for females. Manitoba specimens having similar intermediate counts were considered intergrades between the two subspecies by Grobman (1941). At least until more specimens are available, Saskatchewan individuals are best placed in the same category. Logier and Toner (1961, p. 76) regarded the Saskatchewan form as *O. v. blanchardi* on the basis of geographic range, but had not examined the existing specimens.

The Green Snake is a snake of moist grasslands and is absent in arid regions. Owing to its protective

coloration it is rarely seen in the open, but may be found under various suitable cover as in the preceding species.

The known western limit of the Green Snake in Canada was established by a specimen collected by Mr. Glenford Bellrose of Coronach. It was taken on July 12, 1960, on the SE $\frac{1}{4}$ -13-2-27 W2, near the doorstep of a farmhouse. The area surrounding the farmyard is cultivated farmland and one-half mile east of the farm is pasture land with a creek flowing through it. Another specimen was reported by Mr. Bellrose on the NE $\frac{1}{4}$ -30-2-25 W2 in the same type of area, beside a spring where water is available at all times.

Locality records cited by Logier and Toner (1961, p. 76) are Ceylon, Crooked Lake, Katepwa Beach, North Portal, and Roche Percee and are based on specimens in the Saskatchewan Museum of Natural History and National Museum of Canada. Additional specimens from Indian Head, Round Lake, and Whitewood are recorded by the Saskatchewan Museum of Natural History.

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Phyllopod Crustaceans

by Hugh McLaughlin, Lewvan

"Phyllopod crustaceans are among the most graceful and attractive inhabitants of fresh water pools." So begins a chapter on this group of crustaceans in **Fresh Water Biology** by Ward and Whipple. I would suggest that introduction to this type of water life begin on hands and knees beside a roadside ditch in early spring. Fairy Shrimp will be there and can be depended on to fascinate any student of nature.

Crustaceans are essentially aquatic

arthropods. The name tells that they are chitinous-armoured creatures with jointed legs. The higher crustaceans, including the lobsters and crayfish, are grouped together as the Malacostraca. The smaller crustacea may be grouped together as the Entomostraca. Among the most primitive and most fascinating of the Entomostraca are the Phyllopoda or Branchiopoda, the gill-footed crustacea. The leaf-like appendages serve both for locomotion and for breathing

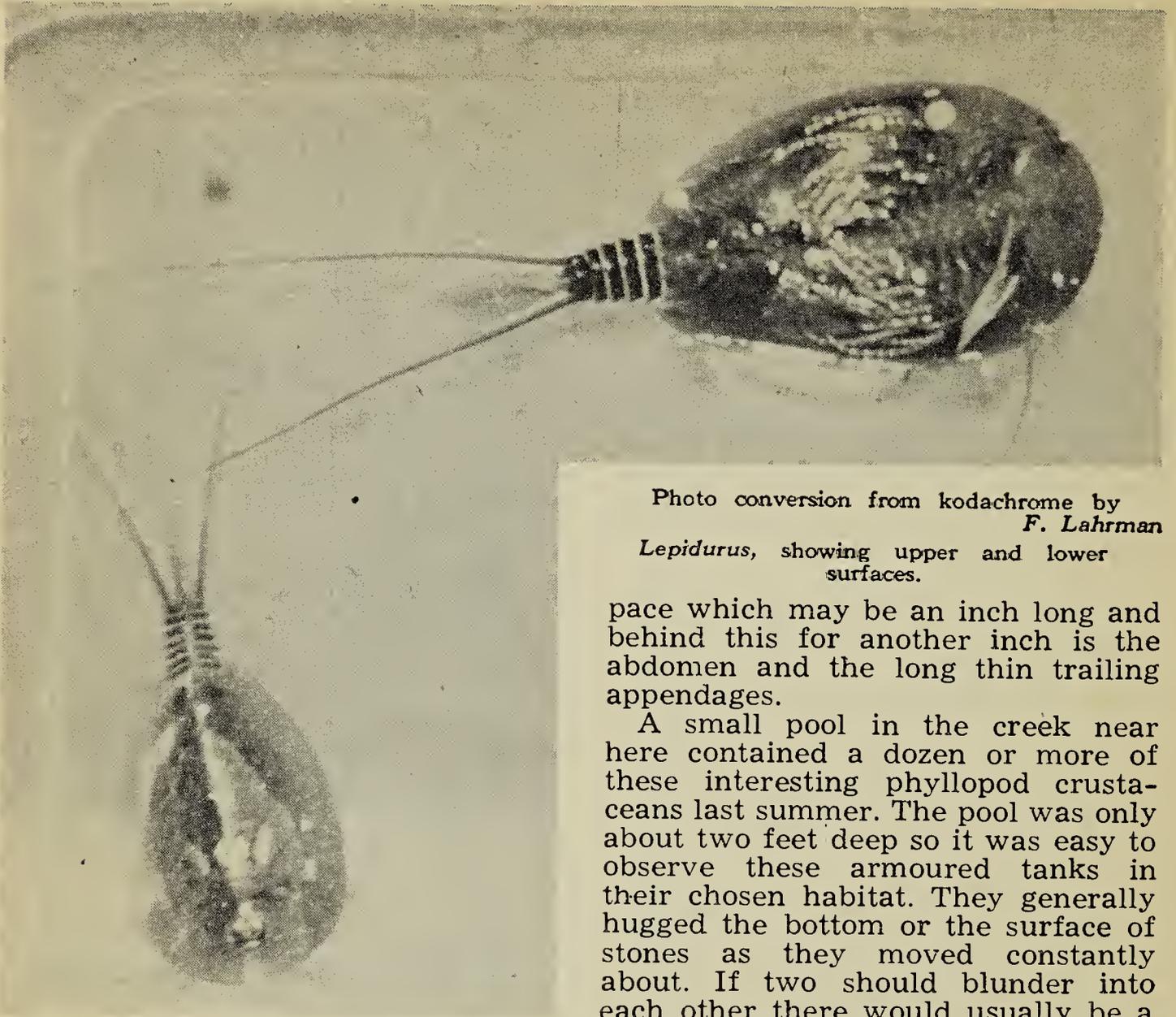


Photo conversion from kodachrome by
F. Lahrman
Lepidurus, showing upper and lower
surfaces.

and they may also play some part in chewing and directing food to the mouth.

Almost any ditch in early spring will contain Fairy Shrimp, *Eubranchipus*. Fairy Shrimp hatch from eggs which have been subjected to the drying and freezing of the previous summer and winter. The eggs seem to require this treatment before hatching. The eggs may be distributed by wind and they may survive several years of drought. Fairy Shrimp usually swim on their backs with their feathery legs rowing them along while they feed on minute plant life.

Fairy Shrimp reach a length of about three quarters of an inch. A flashlight shining into the water at night will bring a gathering of Fairy Shrimp to mill about in the brightness. I have collected Fairy Shrimp as late as July 21 so they may linger quite late into summer.

The Fairy Shrimp is large compared to most of the Entomostraca but *Lepidurus* is even larger. *Lepidurus* has a flattened shell or cara-

pace which may be an inch long and behind this for another inch is the abdomen and the long thin trailing appendages.

A small pool in the creek near here contained a dozen or more of these interesting phyllopod crustaceans last summer. The pool was only about two feet deep so it was easy to observe these armoured tanks in their chosen habitat. They generally hugged the bottom or the surface of stones as they moved constantly about. If two should blunder into each other there would usually be a short tussle. They can swim through the open water, too, but they are mostly bottom feeders. As they grow the shell is shed and it floats on the surface of the water as a translucent brown case. The specimens, illustrated above, which were captured on June 5, had both shed their exoskeletons by June 14. The picture shows the under side of the large one while the smaller one is shown right side up. These two specimens lived in the aquarium until June 29.

Lepidurus may clamber about on plants in the water. I have watched them cling closely to bridge timbers in the creek, possibly browsing on algae. By mid-summer the water is glutted with weeds and phyllopod crustaceans are absent or no longer abundant, though I did find one *Lepidurus* as late as July 21. Now the smell of mint and freshly cut hay is heavy in the air, and the soft sounds of tree crickets, katydids and grasshoppers assail the ears. However, when spring returns we will be watching again for *Lepidurus* and other smaller Crustacea.