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NORTH QUEENSLAND NATURALISTS' CLUB

Meets at Girls' and Infants' School, Abbott Street, Cairns,
usually on second Monday in each month, at 8 p.m.

NEXT MEETING, MONDAY, 10th JUNE, 1940:—

11th March, 1940:

Lecture by Mr. W. White, of Cairns,
"Our Tropical Freshwater Fish as
Observed in Aquarium."

New Member Elected:

Mr. Arnold Johnson, Edmonton.

13th May, 1940:

Dr. H. Flecker, Report of recent visit
to Southern States.

New Members Elected:

Mr. F. Aland, Public Curator's Office,
Cairns.

Mr. W. White, Cairns.

THE LAND-SHELL HEDLEYA

By TOM IREDALE, Conchologist, The Australian Museum, Sydney. N.S.W.

Over fifty years ago the entomologist, W. W. Froggatt, discovered in the Cairns district a very curious little shell, which Cox described as a new genus *Hedleya*, calling the species *macleayi*. At that time Hedley was only on the threshold of the career which was to make him one of the four leading conchologists of the world, and it is obvious that he drew up the description of his namesake. He allotted the little novelty to the family Pupini-

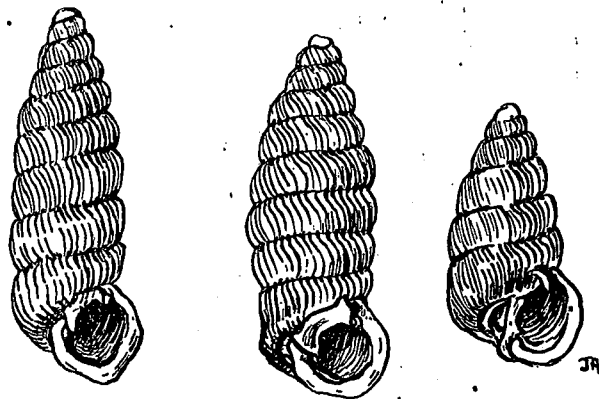
dae mainly on account of the presence of an anterior and posterior canal to the aperture. The Pupinids have circular apertures, and a closely fitting operculum, which is commonly seen. This shell is still very rare, and I make an appeal to field naturalists of the Cairns district to search for this little snail and help to solve its problems. It, moreover, appears to be an appropriate object for research. nothing like this form is known seg-
nite segments

where, and more than one species is now known. Mr. Sidney W. Jackson, collecting in 1908, found two specimens in the Tinaroo scrubs, Barron River. one "found under loose bark on standing tree in scrub," the other "in birds' nest fern." A few years later the Swedish naturalists, under Mjoberg, found another specimen at Evelyn, and upon examination it was found to be a distinct species, which Ochner called *Hedleya umbilicata*. This proves to be identical with the one found previously by Jackson in his birds' nest fern. Later again Hedley, visiting Green Island, picked up a broken specimen, which appears to represent another species.

Now Mr. Joe Shaffery has sent me down from Mossman, North Queensland, a specimen which is again different and is here named *Hedleya shafferyi*, new species. This shell is just on ten millimetres in length, with almost exactly one-third in breadth, that is, one-eighth of an inch broad and three-eighths of an inch long. The apex is tapering, the median whorls a little

swollen and the base a little contracted. It is white, and is closely longitudinally sculptured with wavy raised linear ridges, numbering about fifty on the last whorl the intervals between the ridges being a little wider than the ridges and smooth. There are about ten whorls, the fifth being the broadest. A pronounced spiral rib separates the base of the last whorl, which becomes concave. The aperture is a curious shape, the outer lip curving a little irregularly outward and then similarly irregularly basally receding to the ascending columella, leaving a semi-vertical anterior gutter. Thence across the body whorl a thick callus curves to form a similar posterior gutter with the edge of the outer lip. The irregular formation of this mouth seems to deny the possibility of an operculum, and this is the point that needs clearing up.

The sketches here provided of the three known species should prove the necessity for further information to classify correctly this group.



sides.

large green

stripes along its whole

each segment are tub

Hedleya macleayi, *H. shafferyi*, *H. umbilicata*.

RAPALA DEMOCLES, MISKIN (1884)

MY COLLECTING DIARIES

By M. J. MANSKI, F.R.E.S.

In looking over my diaries since 1932 I note the regular seasonal return of insects. By so doing I save considerable time by avoiding a haphazard search for specimens which may be required. One striking fact is evident in the annual return, almost to the same day of the year, of the butterflies. It shows me the busy months, the off-months, and many other items of interest. It takes me to the open forest in November, December and January. To the rain forests in February, March and April; to the low-lying, swampy country in May, June and July, and it shows me that August and September are months when butterfly collecting can be left alone. Year after year with regularity my records tell the same story, not only of butterflies and moths, but of Coleoptera, Diptera, Hymenoptera, etc., and if you notice in the first week in December the shrill sound of the Cycadae can be heard, only to disappear towards the end of January. The hot, steamy weather is the ideal time for the emergence of butterflies and beetles, and when the first storms of the season appear it is a signal for me to get ready as the collecting time is near at hand.

What a wonderful wealth of information do I receive when I note the entries: At Edge Hill, at Barron River,

at West Cairns, at Silver Cascades, etc.,

"noticed Papilliones, etc., on wing," "obtained eggs of —," "larvae and pupae of —," "mosquitoes bad," etc.

Here I notice when new life-histories have been found. One in particular is before me that may be of interest. It reads: "At road to Barron Waters, noticed berry of *Strychnos Bancroftiana* on ground with small hole in side. Pulled down portion of creeper and obtained larvae and pupae of butterfly unknown to me." Imagine my surprise when the butterfly emerged to discover that it was a butterfly of which only the males were known, two being in the Queensland Museum at Brisbane and one in the Australian Museum at Sydney. These male specimens were in poor condition, and the female was not known. The butterfly is named *Rapala democles*, Miskin (1884), and the life history is herewith recorded: Egg, milky white, round, rough, with a central depression, laid on the berry. On emergence the young larva does not eat the egg shell, but starts to eat its way into the berry, where it remains, only emerging when that berry is eaten out and another berry is entered. The full-grown larva is: Head, light brown, first and second segments white with six black spots forming a diamond with two central spots, then three segments brown, then two white segments

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turning pink before pupation, then three dark brown segments and the remaining segments white.

The larva is shiny, with a few short hairs. The sides of the larva are greenish and somewhat flattened.

Pupae, all brown in some cases or dark brown wing cases with thorax and abdomen pinkish in others; short, squat and fastened with a central girdle inside the berry husk. The butterfly emerges in the morning and has a very swift flight.

The description of the butterfly is:
Male: Upperside black, central areas bright blue, tail to veil, two black, anal lobe black. Underside, greyish-white, bands brown, black spot near tail, anal lobe black.

Female: Both wings, especially the hind wings, much broader than in the male. Above, forewing with costa and termen broadly black, black area much more extensive and less heavily scaled. a central white area usually wholly beyond cell and usually wholly con-

lined between veins two and five. Cilia pale brown, hind-wing as in male. Blue more extensive and paler, especially in five. Beneath: Same as male, but paler and without the purple tint; discal band of forewing usually from vein one. Eyes slightly hairy, between eyes very pale brown; third joint of palpi slightly longer in the female.

The *Strychnos* referred to climbs to a great height up the trees and the butterfly keeps to the tops of the trees and so escapes detection.

This is one of many such occurrences, and a glimpse at the diary at the end of each year tells me the localities at which I collected during the year, what I obtained, where I got contentment with Mother Nature, and brings back memories of many happy days away from the busy thoroughfares and office routines.

A diary is essential to the collector.