

The Canadian Field-Naturalist

ON A NEW PELECYPOD CALYPTOGENA GIBBERA

By C. H. CRICKMAY

C *alyplogena*, a genus of pelecypods of the family Carditidæ is represented in the living Pacific American fauna by *C. pacifica* Dall and *C. elongata* Dall. Species of this genus are not common as fossils. However, an interesting and apparently new form of *Calyptogena* has recently been found by the writer in the lowest beds of the Santa Barbara formation*, so called, on Deadman's Island near the port of San Pedro, California. This new form is to be distinguished from the living type by its outline and proportions:

- Length 52 mm.
- Height 29 "
- Diameter 15 "



Fig. 1. *Calyptogena gibbera* sp. nov., holotype, right lateral aspect, slightly more than natural size.

The new species somewhat resembles *C. elongata* but has a greater height and an arched post-

*Named in 1912 by J. P. Smith who considered it latest Pliocene.

umbonal slope, whence the trivial name. All the dimensions, but especially the length, are greater than those of *C. pacifica*.

The fossil occurs only in the second bed above the base of the formation. It is associated with only one other species, namely, *Phacoides acutilineatus* Conrad which is somewhat more numerous than the *Calyptogena*. The valves of both are still together as in life, and, although densely crowded, lie flat with the bedding. They are set in a matrix of hard, grey shale. The bed which contains them is only six inches thick, and is discontinuous, since it appears nowhere but on the west side of the island near its south end. The stratigraphic relation to the beds below and above appears to be perfect accordance.

The chronologic relations are less clear; though it is plain that the bed is not much younger than the stratum below, or much older than that above. These associated beds contain rich faunas, ninety-five per cent of the species of which are still living. So they might well belong to the latest Pliocene or early Pleistocene. The new *Calyptogena* appears to be extinct—a noteworthy circumstance for a form of this late date. Unluckily this species of itself yields no clue as to its exact correlation. But the chief difficulty about the problem of correlation arises out of the persistence of nearly all the main elements of the faunas. So it may that the appreciation and zonal delimitation of those forms, which, like *Calyptogena gibbera*, have a restricted vertical range will prove an aid toward a solution, and this communication has been written for that purpose.

NOTES ON THE BIRDS, ORCHIDS, FERNS AND BUTTERFLIES OF THE PROVINCE OF QUEBEC, 1928*

By HENRY MOUSLEY

Y ES, not once, but many times the spirit moved us—as I suggested it might in the February number of *The Canadian Field-Naturalist* for 1928, p. 29—and in company with congenial spirits, we again sought

the abodes of that elusive bird the Woodcock (*Rubicola minor*), and with well-trained batteries

*Read before the Province of Quebec Society for the Protection of Birds, Montreal, Jan. 14, 1929, under the title. "Gleanings of a Naturalist in 1928" (illustrated).