

THE PASSING OF CORAGYPS SHASTENSIS MILLER

By LOYE MILLER

During my early work upon the fossil birds of California, a student in the field of palaeornithology was accustomed to thinking in very limited terms as regards either number or completeness of specimens. This limitation was somewhat expanded by the earlier and restricted excavations at Rancho La Brea. We were elated when several hundred bird bones had been retrieved by the time the University of California was obliged to cease its operations in that locality, and we even thought that the asphalt beds had been practically exhausted. Little did we dream that greatly extended activity in the locality would be undertaken and that an almost bewildering wealth of bird bones would ultimately be assembled.

In this early period, a small collection of bones of vultures of the genus *Coragyps* was allocated to the new species *occidentalis* (L. Miller, Univ. Calif. Publ. Bull. Dept. Geol., 5, 1909:306). The study of Rancho La Brea was supposedly completed and work on a collection of bird remains from the Shasta Caves was undertaken. In this latter collection there appeared a few bones assignable without question to *Coragyps*, but quite as definitely not assignable to the species *occidentalis* as then known from Rancho La Brea. The species was described as new under the name *C. shastensis* (L. Miller, Univ. Calif. Publ. Bull. Dept. Geol., 6, 1911:388).

No further specimens of the Shasta bird have ever come to light. At a later date the exploration of Rancho La Brea was resumed with great vigor by the University of California and by the Los Angeles Museum. The two faunas of McKittrick, two at Carpinteria, and the two of uncertain age at Conkling Cavern, New Mexico, and Smith Creek Cave, Nevada, all have yielded more or less material of *Coragyps occidentalis*. More recently the California Institute of Technology has uncovered abundant remains of the same bird in the state of Nuevo León, Mexico. This new material has all been made available to me through the courtesy of Dr. Chester Stock.

Particularly in the Mexican cave do we find age variations all the way from scarcely ossified nestlings to quite old and probably senile individuals. The species apparently used the cavern mouth for nesting, for roosting, and probably for retirement when vitality was reduced by age or other cause. There is no evidence of extreme youth in any of the asphalt specimens, but there is great range of variation in this tremendous series, and part of this variation is doubtless due to the factor of age.

A study of the Rancho La Brea and the Nuevo León series convinces me of their specific identity, and within each series there can be found individual tarsi that practically duplicate the type specimen of *Coragyps shastensis* described in 1911. That species, then, in my opinion passes into the synonymy of *Coragyps occidentalis* described in 1909. Parenthetically, I may say that the other Shasta vulture, *Gymnogyps amplus*, was at the same time re-examined and compared with the great series of California Condor bones from Rancho La Brea, but there was found no specimen that duplicated the great width of tarsus seen in the Shasta bird.

Had those intermediate variants of *Coragyps* been permanently lost, we would have been quite content to recognize two perfectly distinct species. In the horizontal, two dimensional plane of present day geographic distribution, we would often find ourselves obliged to formulate distinct specific categories were the intermediate portions of a species area left unexplored or were they to undergo such profound ecologic change as to make them lethal to the species concerned.

The paleontologist, working with his highly disjunctive record, finds that the fortuitous nature of the fossilization process has robbed him of the "intergrade" specimen and he is quite ready to establish distinct specific categories.

After all, were we able to restore all the intermediates blotted out by that great third dimension of the paleontologist, time, we would doubtless have most known species relegated to the less definite varietal category.

University of California, Los Angeles, March 10, 1941.