

## THE FIRST AMERICAN FOSSIL MANTIS.

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Only two species of Mantidæ have been described from Tertiary formations: *Mantis protogæa*, Heer, from the Upper Miocene of Ceninger, and *Chatoessa brevia*lata, Giebel, from Baltic amber. *Chatoessa*, or more properly *Chateessa* (Burmeister, 1838), is known to-day by three species, all from Brazil; it is not very likely that the amber insect is really congeneric. Heer's *Mantis protogæa* is a very poorly preserved object, from which little can be learned. The discovery of a nearly perfect tegmen in the Miocene shales of Florissant adds the group to the fauna of the American Tertiaries. The venation is of a comparatively simple type, and may be compared with that of the E. Indian and African genus *Gonypeta*, as figured by Handlirsch (Fossile Insekten, Part 1, pl. 2, f. 5). I sent a drawing of the venation of the fossil to Mr. A. N. Caudell, calling attention to its supposed affinities, and asking him whether he could find any other genus showing stronger resemblance. He kindly replies: "I know of no modern genus more likely to contain it than the one you mention. I presume without doubt it is an extinct form representing a new genus." In the meanwhile, however, I have received from Mr. Rehn a copy of his figure of *Photina brevis*, from Paraguay (Proc. Acad. Nat. Sci. Phila., 1907, p. 157), and this is apparently as near to the fossil genus as *Gonypeta*. The most that can be said about the fossil is that it represents a generalized form of the subfamily *Mantinae*, apparently distinct from, though allied to, those now living.

*Lithophotina*, n. g.

Costa little arched; costal region narrow, reticulated, so that the cells above the subcosta (very irregular) are mostly double; subcosta terminating on costal margin about  $2\frac{1}{2}$  times as far from base as from apex; radius ending a little above apex of wing, *not at all branched below* (branched below, forming a radial sector,\* in *Gonypeta* and *Photina*), but giving off about three very oblique branches above, the last of these being itself branched; media branching a little before the middle, the upper branch again branched about  $5\frac{1}{2}$  mm. from the apex, *but the lower simple*; cubitus with three long branches, of which the first is branched about 10 mm. from the base of the tegmen; anal with three branches,

\*I here follow Handlirsch's interpretation (for *Gonypeta*), but comparison with the fossil suggests that the so-called radial sector is really the main stem of the radius, while the supposed end of the radius is the last of the upper branches.