

Pterosaurs. — The Pterosaurs, or flying Lizards, have hollow bones like Birds. The genera *Dimorphodon*, characterized by a long tail, and *Pterodactylus*, by a very short one (Fig. 1321), occur in the Lias, and *Rhamphorhynchus* (Figs. 1323–1325) in the Stonesfield slate and at Solenhofen.

Fig. 1321 represents the skeleton ($\frac{1}{4}$ natural size) of *Pterodactylus crassi-rostris*; it was a foot long, and the spread of the wings about three feet. Fig. 1323 is the *Rhamphorhynchus phyllurus* of Marsh, from Solenhofen, Eich-

1326.



BIRD. — *Archæopteryx macrura* ($\times \frac{1}{4}$). W. Dames.

stadt, Bavaria, and 1325 a restoration; its long slender tail ends in a broad oar (Fig. 1324). The fine specimen in the Yale Museum, New Haven, Conn., has an impression of the wing membrane, showing it to be without feathers.

3. **Birds.** — Specimens of birds have been found in the lithographic limestone of Solenhofen, with nearly complete impressions of the feathers and also well-preserved bones of the limbs, heads, and most other parts of the skeleton. They pertain to a single species, — the *Archæopteryx macrura* of Owen. A single feather was first found in 1860. This was followed, two years later, by the discovery of a nearly entire skeleton, but wanting the head; it was described by Owen. The specimen is now in the British Museum. Later, a third and still more complete skeleton was obtained, and this is in the Museum at Berlin. It has

(1) in the jaws on either side, in sockets, 13 Reptile-like teeth; (2) a long vertebrated tail, having 20 vertebræ, each carrying a pair of long feathers; (3) wing bones like those of the fore leg of a normal three-toed Reptile, having claws at the extremity; (4) four-toed hind limbs, Bird-like in adaptation to biped loco-