

At Aust it has yielded elytra of Coleoptera, wings of insects, and scales, and perfect specimens of the fishes *Legnonotus cothamensis*, *Pholidophorus Higginsi*.

Black paper-shales (10 to 15 feet), finely laminated and pyritous, with selenite and fibrous calcite ("beef") and one or more seams of ferruginous and micaceous sandstone (bone-bed) containing remains of fish and saurians. Some of the shales yield *Avicula* (*Cassianella*) *contorta*, *Cordium phillipianum* (*rhæticum*), *Pecten valoniensis* (= *Avicula contorta* zone).

Green and gray Marls (20 to 30 feet), with alabaster, celestine, and sometimes pseudomorphs of rock-salt; generally unfossiliferous, but yielding *Microlestes*. These Marls form properly the top of the Trias, the bone-bed above serving as a convenient base for the Rhætic beds.

A bone-bed similar to that in the foregoing section reappears on the same horizon in Hanover, Brunswick, and Franconia. Among the reptilian fossils are some precursors of the great forms which distinguished the Jurassic period (*Ichthyosaurus* and *Plesiosaurus*). The fishes include *Acrodus minimus*, *Ceratodus altus* (and five other species), *Hybodus minor*, *Nemacanthus monilifer*, etc. Some of the lamellibranchs (Fig. 380) are specially characteristic; such are *Cardium phillipianum* (*rhæticum*), *Avicula* (*Cassianella*) *contorta*, *Pecten valoniensis*, and *Pullastra arenicola* (Fig. 379).

**Central Europe.**—The Trias is one of the most compactly distributed geological formations of Europe. Its main area extends as a great basin from Basel down to the plains of Hanover, traversed along its centre by the course of the Rhine, and stretching from the flanks of the old high grounds of Saxony and Bohemia on the east across the Vosges Mountains into France, and across the Moselle to the flanks of the Ardennes. This must have been a great inland sea, out of which the Harz Mountains, and the high grounds of the Eifel, Honsdrück, and Taunus probably rose as islands. To the westward of it, the Palæozoic area of the north of France and Belgium had been raised up into land.<sup>17</sup> Along the margin of this land, red conglomerates, sand-

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<sup>17</sup> This land, according to MM. Cornet and Briart, rose into peaks 16,000 to 20,000 feet high! *Ann. Soc. Geol. Nord.* iv.