(b) Pecten æquivalvis, (c) Amm. acanthus. Near St. Amand, Cher, the stage consists of nearly 300 feet of marls and marly limestone, with the zones of (a) Gryphæa regularis, (b) Amm. raricostatus, (c) A. ibex, (d) A. Davœi, (e) A. margaritatus, (f) A. spinatus. In the Rhone basin, it varies up to 340 feet in thickness, but in Provence it expands to nearly 900 feet, the lower half composed chiefly of limestones and the upper half of marls. In Normandy, it is chiefly belemnite limestone, 50 to 65 feet thick.

- 2. Sinemurian (= Lower Lias). This stage (Lias \dot{a} gryphées) is typically developed at Semur, Côte-d'Or (whence its name), where it consists of nodular gryphite limestone with marly bands (23-26 feet) and is divisible into three zones, which, counting from below, are marked respectively by: 1, Ammonites rotiformis; 2, A. Bucklandi; 3, A. stellaris. Near St. Amand, Cher, it is composed of about 15 feet of marly limestone, which represent only its upper part. In the Haute Marne and Jura it is a limestone with curved gryphites, and ranges from 15 to 25 feet in thickness. In the basin of the Rhone it is a calcareous formation, 20 to 25 feet thick, containing the zones of Ammonites Davidsoni, A. stellaris, A. oxynotus, and A. planicosta. Further south, it swells out in Provence to 275 feet, and is separable into a lower group with Amm. Bucklandi, and a higher with Belemnites acutus, Amm. bisulcatus. In Normandy, it is about 100 feet thick, and comprises clays and marly gryphite limestones (Ammonites bisulcatus), surmounted by gryphite limestones and clays (Belemnites brevis, Waldheimia cor.).
- 1. Hettangian (= Infra-Lias), marly and shelly limestones with Ammonites planorbis, etc. (corresponding to the Angulatus and Planorbis zones at the base of the Lias), resting conformably on the sandstones, marls, and bone-bed of the Avicula contorta zone or Rhætic group. In Lorraine, this stage is only 13 feet thick. In Luxembourg, the lower or Planorbis zone is composed of dark clays alternating with bands of fetid limestone (10-40 feet). The upper or Angulatus zone, consisting mostly of sandstone (200 feet), is well seen at Hettange, whence the name. This zone becomes less sandy as it advances into Belgium, where it forms