150-180 feet of limestones, with numerous fossils (Rhynchonella decorata, R. elegantula, Ostrea flabelloides, etc.). The limestones are replaced eastward by marly and sandy beds. In the Côte-d'Or, the stage is largely developed, and is divided into three substages: (a) Lower (115 feet), limestones and marls with zones of Homomya gibbosa, Terebratula Mandelslohi, Pholadomya bucardium; (b) Middle (196 feet), white limestones and oolites with zone of Amm. arbustigerus, Purpura glabra and echinoderms; (c) Upper (82 feet), limestones and marls with Eudesia cardium, Waldheimia digona, Pernostrea Pellati, Pentacrinus Buvignieri, and with land-plants in one of the zones.⁷⁸

5. Bajocian (Oolithe Inférieure) is well developed in the department of Calvados, the name of the stage being taken from Bayeux. Its thickness is 60-80 feet, and it consists of: 1, Lower limestone (Amm. Murchisonæ); 2, limestone with numerous ferruginous onlites, fossils abundant and well preserved (Amm. humphriesianus, A. Sowerbyi, A. Parkinsoni, etc.); 3, Upper white oolite with abundant brachiopods, sponges and urchins (Amm. Parkinsoni, Terebratula Phillipsi, Stomechinus bigranularis, etc.). In the French Ardennes, the stage presents a lower group of marls (32 feet) with Amm. Murchisonæ, A. Sowerbyi, etc., followed by an upper limestone (30-130 feet) with Amm. Blagdeni, A. subradiatus, Belem. giganteus, etc. Toward Lorraine, this limestone becomes charged with corals, some parts being true reefs. North of Metz, the stage is mostly limestone, and reaches a thickness of 330 feet. In Burgundy, the stage is chiefly a crinoidal limestone (100 feet), capping boldly the Liassic marls. In the Jura, it attains a thickness of upward of 300 feet, and consists chiefly of limestone. In Southern France, it swells out to great proportions, reaching in Provence a thickness of 950 feet, where it consists of the following assistes in ascending order: 1, Amm. Murchisonæ: 2, A. Sauzei; 3, A. humphriesianus; 4, A. niortensis. 4. Toarcian (from Thouars=Upper Lias). In Lorraine. this stage (330-370 feet thick) consists of a lower series of marls followed by sandstone and an oolitic brown

⁷⁸ For a study of the gasteropods of this zone in France see M. Cossmann, Mem. Geol. Soc. France (3), tome iii. No. 3, 1885.