rence. Palæontologically the Inferior Oolite has been subdivided into the following zones in descending order:[66]

Zone of Ammonites (Cosmoceras) Parkinsoni (A. subradiatus, Terebratula globata, Rhynchonella subtetrahedra, etc.).

Zone of Ammonites (Stephanoceras) humphriesianus (A. Blagdeni, A. Martinsii, Waldheimia carinata, etc.).

Zone of Ammonites (Harpoceras) Murchisonæ, with sub-zone of A. Sowerbyi in upper part (A. concavus, Terebratula fimbria, T. simplex, T. plicata, etc.).

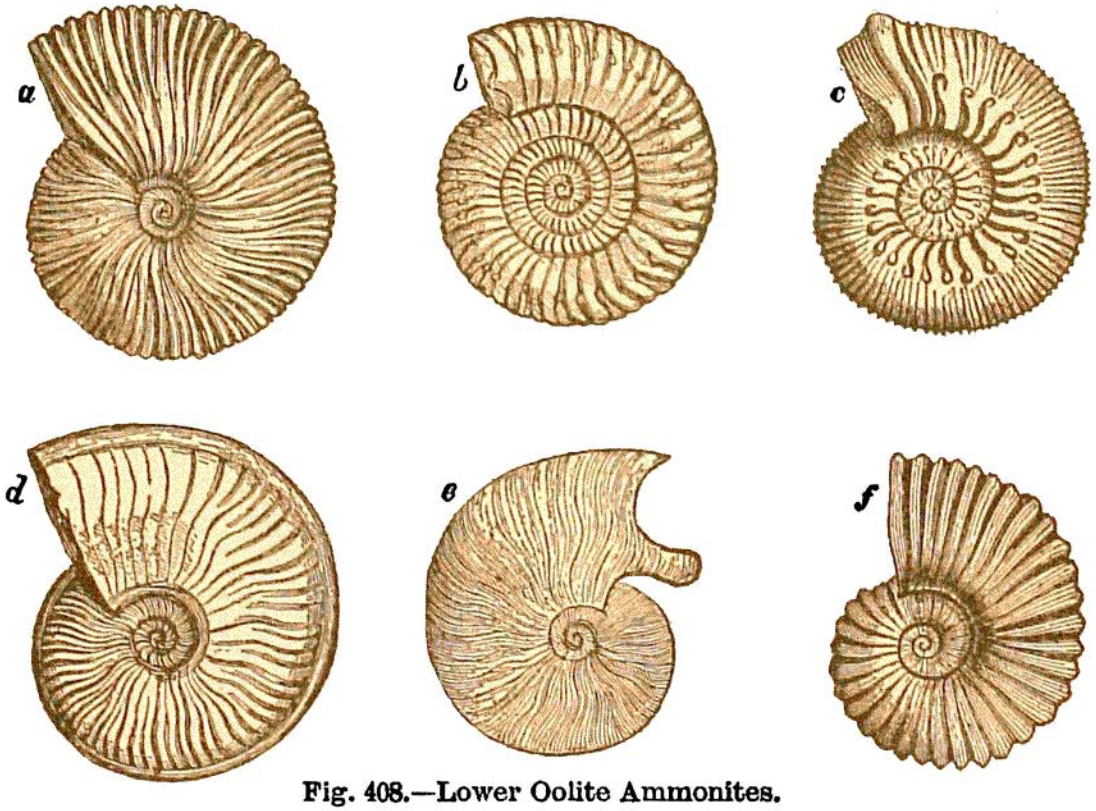

Fig. 408.—Lower Oolite Ammonites.

a, Ammonites (Stephanoceras) macrocephalus, Schloth. (1-3); *b*, A. (Cosmoceras) Parkinsoni, Sby. (1-6); *c*, A. (Stephanoceras) humphriesianus, Sby. (1-5); *d*, A. (Harpoceras) Murchisonæ, Sby. (1-3); *e*, A. (Harpoceras) opalinus, Rein (1-2); *f*, A. (Lytoceras) torulosus, Ziet. (1-3).

The component strata of the group are subject to great variations in thickness and lithological character. The thick marine series of Cheltenham is reduced in a distance of 30 or 40 miles to a thickness of a few feet. The limestones pass into sandy strata, so that in parts of Northamptonshire the whole of the formations between the Upper Lias Clay and

[66] On the Ammonites of these zones, see S. S. Buckman, Q. J. Geol. Soc. 1881, p. 588.