

stem- and arm-joints from the Italian Tertiaries, while he revived d'Orbigny's name *Conocrinus* for d'Archiac's *Bourgueticrinus thorenti*, after an interval of nearly twenty-five years. During this period, so far as I am aware, no palæontologist had taken any notice of d'Orbigny's attempt to differentiate *Conocrinus* from *Bourgueticrinus*. The first description¹ which he gave of the former genus (1847 ?) ran as follows: "C'est un *Bourgueticrinus* ayant la tige comprimée, mais avec une seule série de pièces brachiales, sans pièces basales;" and he referred to it one unnamed species from the Suessonien (Lower Eocene). Three years later (1850) he spoke of *Conocrinus* as "genre voisin des *Bourgueticrinus*, mais sans pièces basales, comme les *Eugeniocrinus*;" and he mentioned *Bourgueticrinus thorenti* of d'Archiac as belonging to this generic type.² Meneghini has shown, however, that two species were described under this name by d'Archiac. One is a much elongated type, first described in 1846, and probably that referred to by d'Orbigny in the following year; while the other that was not noticed till 1850, the year in which the second (first ?) description of *Conocrinus* appeared, is the *Eugeniocrinus pyriformis* of Münster. This species was not referred by d'Orbigny to his new genus *Conocrinus*, though undoubtedly belonging to it, as pointed out by Meneghini. But it was retained by him in *Eugeniocrinus*, so that the only species of *Conocrinus* recognised by d'Orbigny was the elongated *Bourgueticrinus thorenti* of d'Archiac. The figures and descriptions of this type given by the latter author are somewhat incomplete. He had very few specimens, and was exceedingly doubtful about the position of the sutural lines, while they are certainly placed wrongly in his figure,³ according to which the second radials rest upon the sutures of the first. There is likewise no indication of an enlargement of the uppermost stem-joints so as to form a "summit," which is so characteristic of *Bourgueticrinus*; while the presence of basals below the radials or "pièces supérieures" of *Bourgueticrinus thorenti* was distinctly described by d'Archiac, though he probably figured them incorrectly. Nevertheless, *Conocrinus* is a *Bourgueticrinus* without basals, and d'Archiac's species in which basals are present is made the type of the genus!

Neither does it help in the differentiation of the two genera to speak of *Conocrinus* as a *Bourgueticrinus* with a compressed stem, when the stem of *Bourgueticrinus* itself is described as being compressed.⁴ I find very considerable difficulty in comprehending what d'Orbigny really meant by *Conocrinus*. If it be "voisin de *Bourgueticrinus*," but also resembles *Eugeniocrinus* in the absence of basals, why was it omitted in his scheme of classification of the Apiocrinidæ, published in 1858, from the fourth section comprising *Eugeniocrinus* alone,⁵ and distinguished by having only "une série de pièces au sommet"? On p. 95 he pointed out that no Tertiary species of *Bourgueticrinus* were then known, from which one may infer that the Tertiary fossils previously referred to this genus

¹ Cours élément. de Paléontol. et de Géol. stratigr., t. ii., 1852, p. 147.

² Prodrôme de Paléontologie stratigraphique universelle des Animaux Mollusques et Rayonnées, t. ii. p. 322.

³ Mém. Soc. géol. de France, ser. 2, t. ii. p. 200, pl. v. fig. 20.

⁴ Cours élément. de Paléontol. et de Géol. stratigr., t. ii., 1852, p. 147.

⁵ Hist. Nat. des Crinoïdes, p. 2.