On the Fecundation of the Crustacea. By M. Coste.

In most of the species of Decapod Crustacea, the first two pairs of abdominal feet serve as appendages to the internal generative organs, and form a special apparatus, the function of which has not hitherto been thoroughly known. The Cray-fish preserved in the basins of the Collége de France have allowed M. Gerbe to ascertain this function. During copulation, these two pairs of appendages are erected, tending backwards and a little outwards. The posterior pair engages its foliaceous extremity in the twisted channel presented by the anterior pair; and the extremity of the deferent canal becoming evaginated in the form of a penis, between the appendages thus united, but moveable upon each other, pours out the seminal matter at their base. As it is excreted, this matter flows slowly along the deep furrow of the first appendages, and is deposited by them upon the sternum of the female, where it becomes concreted, acquiring vermicular forms.

As the seminal matter of most Crustacea, and especially of the common Cray-fish, is dense, and becomes rapidly solidified when in contact with water, the horny channel through which it runs would be easily obstructed, if the spoon-like extremity of the posterior piece were not adapted to clear it by repeated forward movements at each emission of semen.—*Comptes Rendus*, March 1, 1858, p. 432.

On the Dorsal Cavity of certain Ammonites. By Professor Quenstedt.

Notwithstanding the numerous investigations which have been made upon the Ammonites, there still remain some points to be explained with regard to them; and until this has been done, no precise determination can be effected of a great number of species. M. Quenstedt had long since observed in many casts, along the siphon, a cord, without septa, which is easily detached. His observations upon the *A. Truellei*, D'Orb., from the lower oolite of Moutiers, led him to the following results. Large fragments of this Ammonite show that the ferruginous oolite has penetrated into the dorsal cord, which would only be possible if this cavity were not closed. If the cord be broken, a second shell is formed beneath it, and below this the siphon which traverses the septa.

Neither D'Orbigny nor Oppel have perceived this fact. It is true that it is ascertained with difficulty in small individuals: thus no trace of an aperture is seen in a young *A. pustulatus* from Bellay; whilst an adult shell of the same species, derived from the *Ornater Thon* of Gammelshausen, presents a pyritous crest, which is easily detached, and which proves its analogy with *A. Truellei*. The largest dorsal cavity observed by Quenstedt was presented by a fragment of an Ammonite from the brown upper Jura of Rathshausen, to which he has given, in consequence of this organization, the name of *A. dorsocavatus*. This Ammonite has the same spiral lines and the same high and compressed mouth as the *A. Truellei*, but it has on