

is, in the most backward of the brood, 0.5 mm., while in the most advanced it equals the diameter of the test. The perisome, in which the cribriform rudiments of the plates of the corona and the young spines are being developed, is loaded with dark purple pigment, which makes it difficult to observe the growth of the calcareous elements. About thirty primary spines arise on the surface of the corona almost simultaneously in ten rows of three each: they first make their appearance as small papillæ covered with a densely pigmented ciliated membrane; and when they have once begun to lengthen, they run out very rapidly until they bear to the young nearly the same proportions which the full-grown spines bear to the mature corona. Very shortly some of the secondary spines, at first nearly as large as the sprouting primary spines, make their appearance in the interstices between these; and a crowd of very small spines rises on the nascent scales of the peristome. Successively five or six pedicellariæ are developed towards the outer edge of the apical area, which at this stage is disproportionately large; the pedicellariæ commence as purple papillæ, which are at first undistinguishable from young primary spines; the first set look enormously large in proportion to the other appendages of the perisome. Almost simultaneously with the first appearance of the primary spines, ten tentacular feet, apparently the first pairs on each ambulacrum of the corona, just beyond the edge of the peristome, come into play; they are very delicate and extremely extensile, with well-defined sucking-disks; and with these the young cling to and move over the spines of the mother, and cling to the sides of the glass vessel, if they are dislodged from the marsupium. This species seems to acquire its full size during a single season. We dredged it at the close of the breeding season, and took no specimens intermediate in size between the adult and the young.

“Among the marine animals which we dredged from the steam pinnace on the 19th of January 1874, at depths of from 50 to 70 fathoms in Balfour Bay (a fine recess of one of the many channels which separate the forelands and islands at the head of Royal Sound, Kerguelen Island), there were several examples of a small *Cidaris*, which I will name provisionally *Cidaris nutrix*<sup>1</sup> (fig. 142).

“This species resembles *Cidaris papillata* in the general form and arrangement of the plates of the corona, in the form and arrangement of the primary tubercles of the interambulacral areas and of the secondary tubercles over the general surface of the test, in the form of the plates of the apical disk and of the imbricated calcareous scales of the peristome, in the form, sculpture, and proportionate length of the primary spines, and in the form of the different elements of the jaw-pyramid and in that of the teeth; but the test is more depressed, the secondary spines which articulate to the ambulacral plates and cover the pore-areas are longer and more cylindrical, not so much flattened as they are in *Cidaris papillata*; the large tulip-like pedicellariæ and the long thin tridactyle pedicellariæ mixed with the secondary spines in the northern species are wanting, or in very

<sup>1</sup> Described by Alex. Agassiz as a variety of *Goniocidaris canaliculata*, Zool. Chall. Exp., part ix., p. 44, 1881.