Genus *Calocidaris* H.L. Clark 1907

This genus is characterized by entirely smooth and shiny primary spines.

Calocidaris micans Mortensen 1903

Fig. 1477. ***Calocidaris micans.*** **Diameter 49 mm, longest spine 90 mm; Havana, Cuba.** ZMUC
Side view: The scrobicular spines are much larger than the other secondary spines.

Test relatively high, up to 75 % of the test diameter, not flattened above nor below;
apical system: madreporite not larger than other genital plates, plates densely tuberculated; ocular plates just exsert or just insert;
ambulacra: at the ambitus the interporiferous zone contains four series of almost equal-sized tubercles, adorally and adapically the inner tubercles are smaller than the marginal ones and more irregular; poriferous zone narrow;
interambulacra: areoles large and round, the well-differentiated scrobicular tubercles reach the upper and lower edge of the plates; median zone depressed towards the midline, extrascrobicular tubercles in horizontal series; aboral primary tubercles faintly crenulated at the upper side;
primary spines long and slender, up to three times the diameter, but usually 1.5 times, tapering gently to the tip, totally smooth and shiny, lacking hairs or granules; above the ambitus set with about 16 glassy zones slightly elevated longitudinally, visible only to the aided eye; below the ambitus they form faint, glassy ridges;
oral primaries flattened with ridges and thin edges;
secondary spines small and pointed at the tip; scrobiculars appressed;
large globiferous **pedicellariae** with single, large end tooth and a closed space between the tooth and the large blade opening.
Colour: Test and secondary spines light brown to beige; primary spines white with faintly reddish-brown tip, collar reddish-brown or pinkish, neck and shaft light olive; cleaned test white with very slight olive tint.

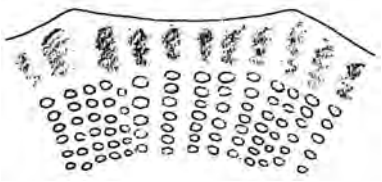

Fig. 1478. *Calocidaris micans.*

Part of section of primary spine: The surface is entirely smooth. No scale. Mortensen 1903

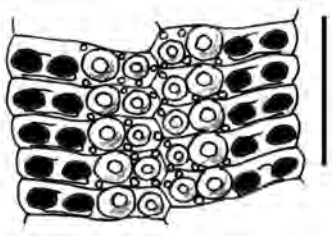

Fig. 1479. ***Calocidaris micans.*** **Ambulacral plates:** The interporiferous zone is covered by four series of tubercles; the inner ones only slightly smaller than the marginal tubercles. Scale 3 mm. Sketch after Phelan 1970

Distribution: West Indies and Gulf of Mexico at a depth of 200 – 330 m.

Literature: Th. Mortensen 1903, 1910; T. Phelan 1970; S. Coppard & H. van Noordenburg 2007.

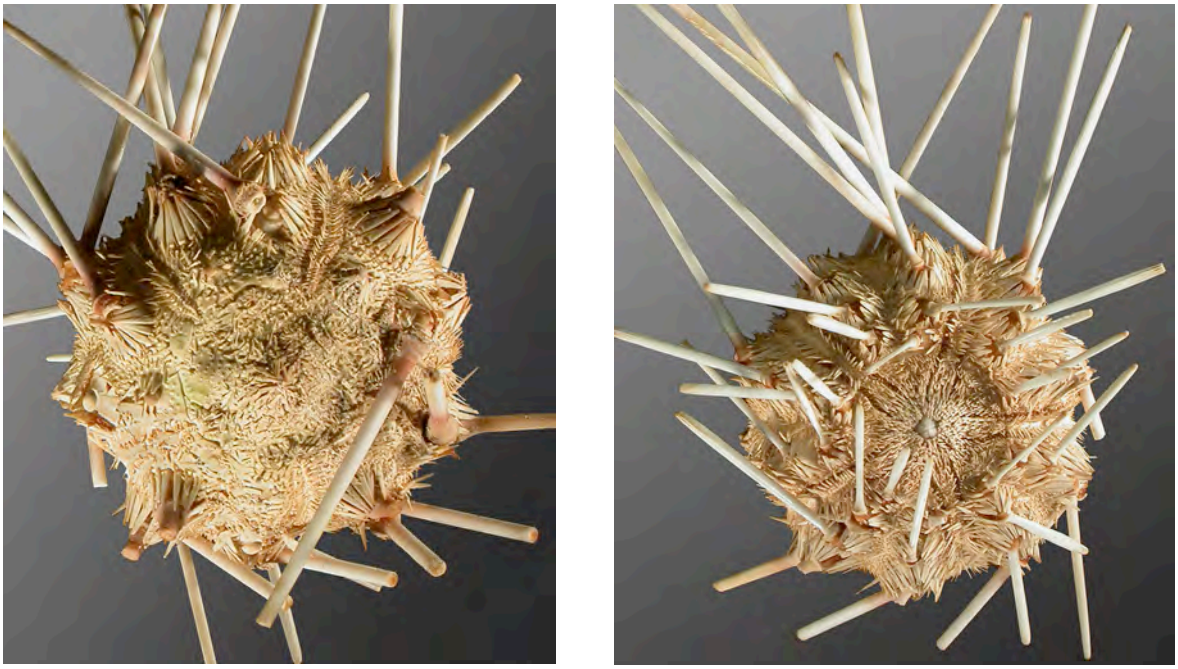

Fig. 1480. ***Calocidaris micans.*** **Diameter 49 mm, longest spine 90 mm; Havana, Cuba.** ZMUC
Above left: Aboral side: The secondary spines excepting the scrobiculars, may be aborally very small.
Above right: Oral side: The primary spines are entirely smooth, lacking any cortical hair or spinules.

Genus *Centrocidaris* A. Agassiz 1904

This genus is characterized by its high and rather naked genital plates.
There is only one species.

Centrocidaris doederleini (A. Agassiz 1898)

Test small , not exceeding 30 mm; low, flattened above and below;
apical system: ocular plates exsert, genital plates remarkably high and narrow, consequently the periproct is small; all plates rather naked, some small tubercles along the outer edges, a single usually in the middle of the genital plates;
ambulacra almost straight, relatively broad, in width almost half of interambulacra; interporiferous zone twice the width of pore zone; marginal tubercles regular and contiguous, usually a single inner tubercle per plate, narrow naked midline;
interambulacra: areoles large and shallow, almost completely filled by the boss; adorally coalescing; scrobicular tubercles slightly larger than marginal tubercles; median space with a single series of extrascrobicular tubercles and a distinct naked midline;
peristome smaller than apical system;
primary spines in length about 1 – 1.5 times the test diameter; slender, cylindrical; aborally with indication of c. 10 low ridges, cortical hair well developed, forming a dense meshwork covered by a glabrous crust appearing totally smooth; subambitally set with more or less distinct fine teeth, oral primaries serrated;
secondary spines long, very slender, club-shaped, not appressed;
stem of **globiferous pedicellariae** with limb.

Fig. 1481. ***Centrocidaris doederleini*****. Diameter of test 12 mm; Galapagos Is.** ZMUC
Above left: Only the uppermost primary spines are entirely smooth. Oral side see fig. 1484.

Colour: Primary spines white, collar yellowish; secondaries greenish with a faint darker midline; naked median space in ambulacra and interambulacra in life dark purple to red violet; apical system white with dark purple to brown sutures; denuded test white with greenish-olive tint and brown to violet-red interporiferous zones in ambulacra.

Distribution: West coast of central America, Cocos and Galapagos Is.; depth 91 – 550 m.

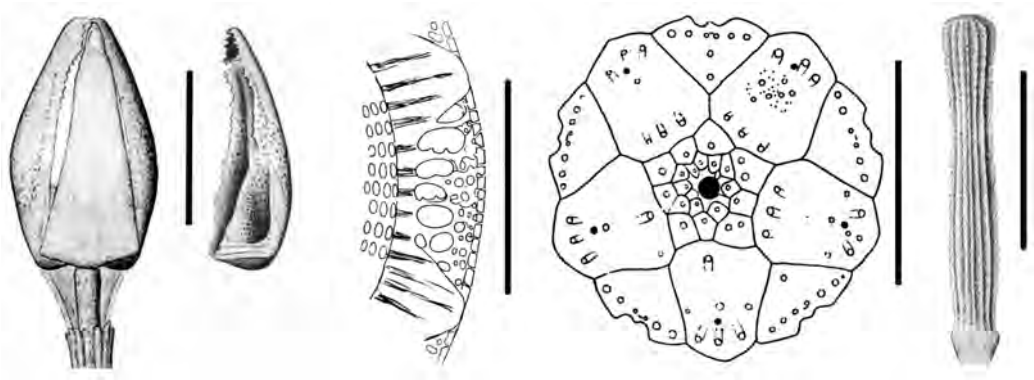

Fig. 1482. ***Centrocidaris doederleini.***

a. Head of a globiferous pedicellaria with a single valve. The stem is provided with a limb. Scale 250µ.

b. Part of transverse section of aboral primary spine: The furrows between the ridges are filled with cortical meshwork (anastomosing hair) covered by a glabrous crust. which is perforated by minute pores. This crust gives the spine a smooth appearance. The ridges are perceptible only by the colour, because they are rather translucent. The ambital primary spines become gradually more thorny. Scale 250µ. Modified.

c. Apical system. Scale 4 mm. **d. Secondary spine.** Scale 3 mm. All Mortensen 1927