

APPENDIX 1

Terminology and abbreviations used in this study. *Definitions modified.

Term	Definition	Author/Present study
Abactinal view	View of the upper surface opposite to mouth (above marginals) of the ossicle	Clark and Downey (1992)
abd	Abductor muscle on crossed forcipulate pedicellariae	Emson and Young (1994)
abiim	Interoral abactinal muscle	Fau and Villier (2019)
abtam	Transverse abactinal interambulacral muscle	Fau and Villier (2019)
aciim	Interoral actinal muscle	Fau and Villier (2019)
actam	Transverse actinal interambulacral muscle	Fau and Villier (2019)
Actinal view	View of the lower surface opposite to anus (below marginals) of the ossicle	Clark and Downey (1992)
add	Adductor muscle on crossed forcipulate pedicellariae	Emson and Young (1994)
Adradial extension	Adambulacral carinae on the plate margin	Fau and Villier (2018)
amim	Ambulacral-inferomarginal articulation	Present study
Articular ridge	Projection of the basal plate where crossed forcipulate pedicellariae valves rest	Emson and Young (1994)
Basal plate	Ossicle joining two valves and attaching abductor and adductor muscles located in the basal part of the crossed forcipulate pedicellariae	Emson and Young (1994)
Base (of the spines/spinelets)	Coarse, proximal end of the spine that articulates to the boss of the ossicle	Present study
Base (of the ambulacrals)	Inferior part that articulates with two adjacent adambulacral ossicles through a transverse articular ridge on its actinal surface and proximal and distal wing-like processes on which proximal (padam) and distal (dadam) adambulacral-ambulacral muscles insert	Gale (2011); Fau and Villier (2019)
Body	Actinal part of the ossicle bearing the spines, the odom and aciim muscles on the interrarial side, and the iioa articulation	Fau and Villier (2019)
Boss	A mound-like projection for spine attachment.	Turner and Dearborn (1972)
Spine pit	A central depression in some bosses. A notch completely or partially surrounded by an articulation area in a boss.	Turner and Dearborn (1972). Fau and Villier (2019) (as a pustule).
Canine	Canine-like tooth on upper part of crossed forcipulate pedicellariae valves	Chia & Amerongen (1975)
costcost	Costae-costae ossicle articulation	Present study
Crest	Ridge separating the muscle insertions, padam and dadam on the adambulacrals (brisingids and zoroasterids). Ridge or elevation	*Fau and Villier (2019)
dada	Ambulacral/adambulacral articulation (distal on the ambulacral, proximal on the adambulacrals)	Fau and Villier (2019)
dadam	Distal ambulacral/adambulacral muscle, on the ambulacrals	Fau and Villier (2019)
Diastema	Gap between the distal teeth and median teeth on crossed forcipulate pedicellariae valves	Fau and Villier (2019)
Distal	Direction toward the tip of the arm	Fau and Villier (2018)
dicoa	Trace on the oral plates of the articulation between the oral and the first ambulacral ossicle	Fau and Villier (2019)
dicoam	Oral/first ambulacral distal muscle insertion, on the oral	Fau and Villier (2019)
doda	Distal oral/odontophore articulation	Fau and Villier (2019)
Furrow	Furrow on the distal process of the first ambulacrals and on the shaft of ambulacrals	Fau and Villier (2019)
Head (of the ambulacrals)	Superior part that articulates with the corresponding ambulacral plate of the opposing column across the mid-radial line by means of an interdigitating dentition	Gale (2011)



Term	Definition	Author/Present study
iioa	Interoral articulation	Fau and Villier (2019)
imabt	Inferomarginal-abactinal articulation	*Fau and Villier (2018)
imim	Inferomarginal-inferomarginal articulation	Present study
interadam	Interadambulacral muscle	Fau and Villier (2019)
Interradial view	View of the surface of the ossicle that faces away from the radial plane (with respect to the midradial line along the arms)	*Fau and Villier (2018)
lia	Longitudinal interambulacral articulation	Fau and Villier (2019)
lim	Longitudinal interambulacral muscle	Fau and Villier (2019)
Medial projection	Mid process with teeth on crossed forcipulate pedicellariae valves	Chia & Amerongen (1975)
Median teeth	Transversal tooth on upper part of crossed forcipulate pedicellariae valves	Chia & Amerongen (1975)
odom	Odontophore-oral muscle	Fau and Villier (2019)
odomim	Odontophore-inferomarginal articulation	Present study
pada	Ambulacral-adambulacral articulation, (proximal on the ambulacral, distal on the adambulacral)	Fau and Villier (2019)
padam	Proximal ambulacral-adambulacral muscle, on the ambulacral	Fau and Villier (2019)
Plateau	Flat area at the end of the abactinal ramus edge of the oral ossicle, generally distinct from the latter by a change of slope, bearing the doda articulation on the interradial side, and the complex dicoa/ dicoam on the radial side	Fau and Villier (2019)
pada	Proximal odontophore-oral articulation	Fau and Villier (2019)
procoa	Proximal oral-first ambulacral articulation, on the orals	Fau and Villier (2019)
procoam	Proximal oral-first ambulacral muscle on the oral	Fau and Villier (2019)
Proximal	Direction toward the center of the disk	Fau and Villier (2018)
R	Radio mayor (del centro del disco a la punta del brazo)	Clark and Downey (1992)
r	Radio menor (del centro del disco a un borde interradianal)	Clark and Downey (1992)
Radial view	View of the surface that faces towards the radial plane (with respect to the midradial line along the arms)	*Fau and Villier (2018)
Ramus	Abactinal extension of the oral ossicle, bearing the abiim muscle and the poda articulation on the interradianal side, and the complex procoa / procoam on the radial side of the ossicle	Fau and Villier (2019)
riom	Interoral muscle	Fau and Villier (2019)
rng	Passageway of the nervous oral ring	Fau and Villier (2019)
rvg	Groove along the oral ossicles in which lies the ring canal of the ambulacral system	Fau and Villier (2019)
Shaft (of the ambulacrals)	Middle part of the ambulacrals	Gale (2011); Fau and Villier (2019).
Shaft (of the spines)	Long section of the spines	Gale (2011)
Teeth (of the ossicles)	Imbricating teeth and socket structures, on the ambulacral head. Similar structure can appear on the interradianal side of the orals and of adambulacrals of the adoral carina.	Fau and Villier (2019)
Teeth (of the pedicellariae)	Sharply pointed spines on the valves of a pedicellariae	Emson and Young (1994)
Terminal peg	Extension of the basal plate to interlock closely with the crossed forcipulate pedicellariae valves	Emson and Young (1994)
Trabeculae	Parallel columns along the spine/spinelet	Gale (2011)
Wing	Process at the base of ambulacrals on which proximal (padam) and distal (dadam) muscles insert	Gale (2011); Fau and Villier (2019)