Table S1: Museum voucher and Genbank accession numbers for each species, holotype and paratype specimens. FMNH refers to the Florida Museum of Natural History and BPBM to Bernice Pauahi Bishop Museum. *Refers to the holotype specimen

Species	Type	FMNH	BPBM cat no	Field code	COI Genbank acc. No.	28S Genbank acc. No
Haliclona (*Gellius*) *loe**	holotype	UF 4064	BPBM C1523	BKON-2663/KB111627	MW059064	-
Haliclona (*Gellius*) *loe*	paratype	-	BPBM C1533	KBOA061118124	-	-
Haliclona (*Gellius*) *loe*	paratype	-	BPBM C1524	KBOA03161837PFA	-	-
Haliclona (*Gellius*) *loe*	paratype	-	BPBM C1549	KBOA03161852	-	-
Haliclona (*Gellius*) *loe*	paratype	UF 4516	BPBM C1534	BKON-2798	-	-
Haliclona (*Gellius*) *loe*	paratype	-	BPBM C1682	KBOA11211763	-	-
Haliclona (*Gellius*) *loe*	paratype	UF 4491	BPBM C1673	BKON-2773	In process	In process
Haliclona (*Gellius*) *loe*	paratype	-	BPBM C1672	SC09032218	-	PQ032469
*Haliclona (Reniera) kahoe**	holotype	-	BPBM C1539	KBOA0316182	-	PQ032470, PQ032471
Haliclona (Reniera) kahoe	paratype	-	BPBM C1537	KBOA061118120	MW059059	PQ130163
Haliclona (Reniera) kahoe	paratype	-	BPBM C1538	KBOA061118376	-	PQ032472
Haliclona (Reniera) kahoe	paratype	-	BPBM C1540	KBOA0316188	-	PQ032473
Haliclona (Reniera) kahoe	paratype	-	BPBM C1551	KBOA01191876	-	-
Haliclona (Reniera) kahoe	paratype	UF 3955	BPBM C1552	BKON-2554/KBOA08011740	-	MW016133
Haliclona (Reniera) kahoe	paratype	-	BPBM C1553	KBOA12191617	-	PQ124964
Haliclona (Reniera) kahoe	paratype	-	BPBM C1570	KBOA1121171	-	-
Haliclona (Reniera) kahoe	paratype	-	BPBM C1554	KBOA0213176	-	PQ032475
Haliclona (Reniera) kahoe	paratype	-	BPBM C1675	KBOA12191622	In process	In process
Haliclona (Reniera) kahoe	paratype	-	BPBM C1679	KBOA0213176	-	-
Haliclona (Reniera) kahoe	paratype	-	BPBM C1679	KBOA03161864	-	-
Haliclona (Reniera) kahoe	paratype	-	BPBM C1678	KBOA03161880	-	-
Haliclona (Reniera) kahoe	paratype	-	BPBM C1674	KBOA061118341	-	-
Haliclona (Reniera) kahoe	paratype	-	BPBM C1677	KBOA0316183	-	-
Haliclona (Reniera) kahoe	paratype	-	BPBM C1680	KBOA1121174	-	-
Haliclona (Reniera) kahoe	paratype	-	BPBM C1681	KBOA11211712	-	-
Haliclona (Reniera) kahoe	paratype	-	-	KBOA12191619	-	MW016134
Haliclona (Reniera) kahoe	paratype	-	BPBM C1676	KBOA12191632	-	MW016135
Haliclona (*Rhizoniera*) *pahua**	holotype	-	BPBM C1518	KBOA08011735	MW059074	-
Haliclona (*Rhizoniera*) *pahua*	paratype	-	BPBM C1517	KBOA09271753	MW143255, In process	MW016168, In process
Haliclona (*Rhizoniera*) *pahua*	paratype	-	BPBM C1531	KBOA03161848PFA	-	-
Haliclona (*Soestella*) *caerulea*	paratype	UF 3800	BPBM C1519	BKON-1810	MT586743, In process	In process
Haliclona (*Soestella*) *caerulea*	paratype	UF 4474	BPBM C1520	BKON-2755	-	-
Haliclona (*Soestella*) *caerulea*	paratype	-	BPBM C1638	KB0813205	-	-
Haliclona (*Soestella*) *caerulea*	paratype	-	BPBM C1532	KB0813205PFA	-	-
Haliclona (*Soestella*) *caerulea*	paratype	UF 3735	BPBM C1545	BKON-1034	-	MW016360
Haliclona (*Soestella*) *caerulea*	paratype	-	BPBM C1541	KBOA0316186	-	MW016153
Haliclona (*Soestella*) *caerulea*	paratype	-	BPBM C1542	KBOA061118510	-	MW016155
Haliclona (*Soestella*) *caerulea*	paratype	-	BPBM C1543	KBOA061118353		MW016154
Haliclona (*Soestella*) *caerulea*	paratype	-	BPBM C1544	KBOA061118368	MW059075	PQ032477
Haliclona (*Soestella*) *caerulea*	paratype	-	BPBM C1550	KB611186PFA	-	MW016154
*Gelliodes conulosa**	holotype	UF 3805	BPBM C1510	BKON-1815	In process	In process
Gelliodes conulosa	paratype	-	BPBM C1636	KB0918203	-	-
Gelliodes conulosa	paratype	-	BPBM C1511	KB0918203PFA	-	-
Gelliodes conulosa	paratype	UF 3968	BPBM C1512	KBOA0607173	-	MW016123, MT452542
Gelliodes conulosa	paratype	-	BPBM C1513	KBOA0801172	-	PQ032476
Gelliodes conulosa	paratype	-	BPBM C1514	KBOA01191813PFA	-	-
Gelliodes conulosa	paratype	-	BPBM C1637	KBOA12191630	MT586742	MW016124

Table S2: Summary of morphological data of known *Haliclona* spp. sharing similar characters to new species described in this study from the Pacific Ocean, Indian Ocean, Arabian Sea, Adaman Sea, Gulf of Aden, Atlantic Ocean, Caribbean Sea, Mediterranean Sea, Adriatic Sea and Aegean Sea.

Species	**External morphology**	**Skeleton morphology**	**Site description**	**Distribution**
Haliclona aperta (Sarà, 1960)	Encrustation (small)	**Oxeas** gently arched with well-touched points (105-136 x 30-5 µm). **Sigma** large aperture, medium flexion, appearance of a circumflex or a comma (34-43 µm) maximum aperture.	Coralline substrate, 30 m	Mediterranean Sea, Ischia
Haliclona carteri Burton, 1959	Encrusting; surface, even, minutely hispid; oscules small, texture firm, light brown color when dry.	Dense, somewhat confused, subisodictyal reticulation; **Oxeas**; 40 x 8 µm	Bottom sand and shells; 37 m depth	Western Indo-Pacific, North Arabian Sea, Adaman Sea, Gulf of Aden
Haliclona densaspicula Hoshino, 1981	Small, thin (< 0.5 cm thick), hilly encrusting on surface of barnacle or bivalve shell; color brown; consistency hard, and fragile; surface smooth and even; numerous oscules (0.2–0.5 cm wide), pores not detected.	**Ectosome**: not specialized. **Choanosome:** isodictyal or subisodictyal reticulation. Numerous free oxea from reticulation. **Oxeas**: hastate smooth, straight to gently curved, sharp ends 185–217–250 x 3–10–15 µm.	Intertidal or subtidal; encrusting on barnacle	Temperate Northern Pacific, Inland Sea of Japan
Haliclona flabellodigitata Burton, 1954, sensu de Laubenfels (1957)	Semi encrusting, convoluted lobes (1 mm thick); color whitish orange; consistency soft; surface not hispid, no visible pores or oscules.	**Ectosome**: not specialized. **Choanosome:** few specular tracts or fibers with little spongin. **Oxeas**:120–160 x 0.5–3 µm.	Dredge offshore Pearl Harbor; 50 m depth	Eastern Indo-Pacific, Hawai‘i, Central Indo-Pacific Australia
Haliclona glabra Bergquist, 1961	Thinly encrusting; surface, even, minutely, hispid; oscules are few, minute, and scattered; texture firm and friable; color alive dull cream, and pale brownish white in spirit.	Isodictyal unispicular reticulation, triangular ascending fibers**. Oxeas**:152 x 7 µm.	Intertidal, under sides of boulders at low tide	Temperate Australasia, Stanley Bay, New Zealand
Haliclona hydroida Tanita & Hoshino, 1989	Thinly encrusting (1–2 mm thick); surface is smooth but uneven, and punctiform; oscules and pores are indistinctive; color ivory buff in spirit; texture soft, compressible, but not tough	**Ectosome**: not specialized. **Choanosome:** regular network of a primary (20 µm in diameter composed of several rows of spicules) and secondary tracts (few rows of oxea 100 ~ 200 µm apart each other). The tips of primary tracts are spicules that form a brush at surface. **Oxeas**: smooth hastate, 120 –145 x 7 – 14 µm.	On hydroid; 20–25 m depth	Temperate Northern Pacific, Japan
Haliclona innominata (Kirkpatrick, 1900)	Encrusting pale brown sponge with a faint reddish tinge; texture soft and elastic.	Unispicular reticulation of triangular and quadrangular meshes with sponging at nodes. **Strongyles:** 126 x 8 µm, slightly curved in the middle. **Oxeas:** 108 x 2.5 µm, curved at the center	Encrusting on surface of shells	Central Indo-Pacific, Christmas Island

Table S2 continued

Species	External morphology	Skeleton morphology	Site description	Distribution
Haliclona isodictyalis Bergquist, 1961	Encrusting (≤ 3 mm thick); surface minutely shaggy and hispid; oscules apical on tubular processes; texture soft and friable; color in life pale cream, in spirit pale brownish white.	Subregular, isodictyal reticulation, mainly unispicular**. Oxeas:** 130 x 7 μm	Point Chevalier reef	Temperate Australasia, New Zealand
Haliclona lentus Hoshino, 1981	Irregular, massive, or thick encrusting (5x3x3 cm); color brown; consistency very soft, compressible, and tough; surface porous and evenly conulose (<0.5 mm in height and 0.4–0.5 mm apart); oscules 2–3 mm in diameter	**Ectosome**: not specialized. **Choanosome**: subisodictyal arrangement or irregular reticulation of oxeas, never constituting tracts. **Oxeas**: smooth, fusiform, slightly bent at the middle 120–131–145 x 3–4–6 μm	Intertidal zone, low tide subzone, on rocky substrate.	Temperate Northern Pacific, Japan
Haliclona libera Hoshino, 1981	Very thinly encrusting sponge (1 x 1 x 0.2 cm thickness); color gray; consistency very soft; surface smooth, even. Oscules and pores invisible.	**Ectosome**: Not specialized. **Endo**: loose, irregular reticulation of spiculo-fibers. Primary fibers (30-50 um thick), 10-20 rows of spicules. Secondary fibers (10-20 um thick), 1-10 rows of spicules. **Sigmas** C shaped (15 μm) near the spiculo-fibers or in the flesh. **Oxea** smooth, slightly arched, bent at center, 150-164-175×6-6.4-8 μm.	Subtidal zone, 12-13 m in depth, on barnacle shells	Temperate Northern Pacific, Japan
Haliclona lutea (Lendenfeld, 1887)	Small and partly encrusting; very soft. Fresh and in spirit of yellow color. 15 mm high, with irregular lobed outline, 60 mm wide.	Skeletal network massively wide–meshed. **Oxeas** thick, short and slightly curved, 60 x 6 μm	Port Phillip	Temperate Australasia, South Coast of Australia
Haliclona macropora (Thiele, 1905)	Encrusting, 5 mm thick, rare oscules 2–4 mm. Grey yellow in ethanol	**Ectosome**: not described. **Choanosome**: dense, regular, multispicular primary tracts. Spicules pierce surface. Scarce spongin Subdermal spaces present. Spicules pierce surface. Scarce spongin Oxeas: 118–125 x 4–5.2–8 μm	None provided	Temperate South America, Juan Fernandez Islands, Chile
Haliclona madagascarensis Vacelet et al., 1976	Coating sponge, up to 2 mm thick on collected samples, covering large surfaces; white color alive, light brown in alcohol; rather soft and fragile consistency; surface finely hispid, bears oscula with raised margins 1 to 2 mm in diameter	**Ectosome**: not specialized. **Choanosome:** Isodictyal network, with ascending bi– or trispiculate lines, parallel, spaced 200 μm , the end of which gives the fine superficial hispidation; **Oxeas** with sharp points: 125–145 x 5–6 μm	Overhang; 15 m depth	Western Indo-Pacific, Southwest coast of Madagascar

Table S2 continued

Species	External morphology	Skeleton morphology	Site description	Distribution
Haliclona maxima Bergquist & Warne, 1980	Encrusting (1–10 mm thick); color fawn to mustard in life, grey in spirit; texture soft and compressible; surface uneven, shaggy, hispid with vertical spicule tufts; oscules (0.5 to 3.0 mm in diameter) not abundant and scattered at random. Wide subdermal canals beneath the transparent dermal membrane lead to the oscules	**Ectosome**: not specialized. **Choanosome:** irregular network of multispicular tracts (3–10 spicules across) and isolated spicules. **Ectosome**: not described. **Choanosome**: tracts are organized as vertical fibers near the surface, and as spicule brushes (0.7–1.4 mm apart) projecting above the surface. In the basal region of the sponge the skeleton is a haphazard arrangement of individual spicules. **Oxeas** straight, slightly curved, or more often centrally bent. Taper abruptly to sharp points, 274–293–317 μm.	Growing on interstices of shell aggregates in the intertidal	Temperate Australasia, New Zealand
Haliclona minima (Lendenfeld, 1887)	Creeping, not branched, circular, 4 mm thick, 150 mm long, serpentine, hard; oscula (0.3 mm wide) not raised, scattered.	Skeletal mesh (0.3 mm wide) and main fibers (0.08 mm thick). **Oxea** straight, sparse in the main fibers and in the connecting fibers scattered individually, 67 x 3 μm.	None provided.	Temperate Australasia, New Zealand, Australia
Haliclona nitens Desqueyroux–Faúndez, 1990	Lamellar, massive, 15 mm thick; oscula 3–4 mm wide with raised collars; consistency very soft, brittle; surface smooth; color tan in ethanol	**Ectosome**: well defined, isodictyal. **Choanosome**: isodictyal to subisodictyal, no tracts. Spongin nodal. **Oxeas** in two categories, 100–106 x 1.6–2.0 μm (I), 102–118 x 3–4 μm (II).	None provided.	Eastern Indo Pacifc, Easter Island
Haliclona offerospicula Hoshino, 1981	Small, irregular, thin (2x1x0.5 cm); color ivory buff; consistency slightly compressible, fragile; surface smooth to touch, even; oscules (2 mm wide) few, open in places. pores microscopic.	**Ectosome**: not specialized. **Choanosome**: unispicular tracts ascend in a row to the surface as primary tracts (40–50 um apart) and irregularly connected with separate spicules. **Oxeas** smooth thin strait to slightly curved, sharp points 75–82–90 x 2–2.8–3 μm	Attached to the surface of an annelid tube in the intertidal	Temperate Northern Pacific, Japan
Haliclona permollisimilis Hoshino, 1981	Irregular and thickly encrusting (3x2.5x1 cm), or small, lobate and massive; color pansy purple; consistency soft, not very tough in life, and slightly compressible when dry; surface smooth, punctated, and uneven; oscules (0.5–3.0 mm) and open over entire surface, 0.5–1.0 mm apart	**Ectosome**: not specialized. **Choanosome**: partly loose, subisodictyal arrangement with some very vague tracts, irregularly and loosely composed of one to several rows of oxeas, ascending as primary fibers. These tracts are irregularly connected with a single oxea, several rows of oxea, or irregularly reticulated oxea. **Oxeas** smooth, hastate, slightly bent at the middle or gently curved. 110–165–180 x 5–6.8–8 μm	Intertidal zone, low tide subzone	Temperate Northern Pacific, Inland Sea of Japan

Table S2 continued

Species	External morphology	Skeleton morphology	Site description	Distribution
Haliclona rapanui (Desqueyroux–Faúndez, 1990)	Encrusting (30x20x19 mm); oscula 2–3 mm wide; consistency firm, crumbly; surface smooth, hispid; color in ethanol whitish.	**Ectosome**: not specialized. **Choanosome**: dense, isotropic, confused, some discontinuous multispicular primary tracts, spicules pierce surface. **Oxeas** in two categories, some modified to styles and strongyles type 1: 157–170–180 x 6–7–8; type 2; 128–148–163 x 6–8–8 μm	Encrusting on rocks at low tide	Eastern Indo Pacifc, Easter Island
Haliclona rectangularis (Ridley & Dendy, 1886)	Encrusting (2 mm thickness); mound–like prominences, each of which normally bears a single osculum at the summit; oscules (4 mm in height); color in spirit pale yellow; texture compact, compressible, elastic, tough and fibrous; surface subglabrous, granulated. Oscula rather small; at the summits of projections; porous (40–50 μm in diameter) surface	**Ectosome**: polygonally meshed reticulation; horny fibers, polyspiculous, echinating, meshes (140 μm in diameter). Dermal membrane thin and transparent; firmly adherent to the underlying tissues. **Choanosome**: regular, well–developed, rectangular meshes of strong spiculofiber; primary lines, secondary (60 μm thick). **Oxeas** stout, curved 88 x 9 μm.	Growing on shell, 30 m in depth	Central Indo-Pacific, Philippines
Haliclona reversa (Kirk, 1911)	Flattened, encrusting (4–5 cm in length, 0.7 cm thickness); oscula (4 mm in diameter) few, scattered, flush with the surface.	3–5 sided meshes bound by spongin; spicules project outwards form surface and are imbedded halfway. **Oxeas** blunt, slightly curved 100 x 5 μm	Rock pools	Temperate Australasia, Meyer Island, New Zealand
Haliclona sabulosa Bergquist & Warne, 1980	Encrusting to massive (1.5 x 3 cm) with short, rounded ocular papillae, almost totally invested with sand grains; color fawn to grey alive and in spirit; texture firm and very crumbly.	**Ectosome**: not specialized. **Choanosome**: ascending fibers with a few isolated spicules connecting them. Skeleton extends 0.2-0.4 mm below surface and the rest is composed of sand grains. **Oxeas** with conical points 61-95 x 5 μm. **Sigmas** C-shaped 18 μm	Spirts bay, Intertidal, 8 m depth	Temperate Australasia, New Zealand
Haliclona sasajimensis Hoshino, 1981	Massive irregular (3 x 2 x 2 cm) or short, erect massive; color ivory buff; consistency very soft; surface smooth; oscules (2-3 mm in diameter) apical, numerous.	**Ectosome**: not specialized. **Choanosome:** subisodictyal reticulation of oxea in all parts of sponge. Oxeas hastate, smooth, slightly arched 108-128-130 x 3-8-9 μm.	intertidal zone	Temperate Northern Pacific, Japan
Haliclona sataensis Hoshino, 1981	Irregular, thin (3x1x2 cm); color old rose; consistency hard, incompressible, or fragile; surface smooth, almost even; oscules and pores invisible.	**Ectosome**: not specialized. **Choanosome**: Isodictyal reticulation, occasional irregular reticulation of vague tracts. **Oxeas** only hastate, nearly straight, sharply pointed 140–150–155 x 6–6.5–7 μm	Subtidal, encrusting on surfaces of other sponges	Temperate Northern Pacific, Japan

Table S2 continued

Species	External morphology	Skeleton morphology	Site description	Distribution
Haliclona scabritia Tanita & Hoshino, 1989	Encrusting, spreading on stone surface (50x35 mm wide and 1 ~ 2 mm thick); surface punctate, smooth, and almost even; oscule indistinct; color ecru in spirit; texture soft and fragile.	**Ectosome:** not specialized. **Choanosome**: subisodictyal reticulation, occasionally irregular reticulation. **Oxeas** covered with delicate unevenness, straight to gently arched, rounded ends, 130–170 x 8–9 μm.	62–72 m deep	Temperate Northern Pacific, Japan
Haliclona tenacior Bergquist, 1961	Encrusting, irregularly massive; surface uneven, minutely, and irregularly subpapillose; oscules few and inconspicuous; texture firm and friable; color in life dirty–muddy cream, in spirit light greenish brown.	Closely knit reticulation of uni– to multispicular fibers. **Oxeas** 140 x 7 μm	Waitawa Bay, on rocks or seaweed	Temperate Australasia, New Zealand
Haliclona tenuis Hoshino, 1981	Thinly encrusting (1–2 mm thick), irregular, with numerous low branches; color pale cinnamon; consistency slightly compressible, not tough; surface smooth, minutely hispid, uneven; oscules (0.5–1.5 mm in diameter) scattered, or forming lines on the backs of repenting branches; microscopic pores	**Ectosome**: not specialized. **Endo**: ascending di– or trispicular primary tracts (60–90 um apart), and terminate as surface projections (40–60 um in height). Secondary tracts connect the primary tracts in isodictyal reticulation. **Oxeas** fusiform, smooth, straight to gently curved, sharp ends 83–94–100 x 5–6.5–8 μm	Growing on polychaete tube, intertidal	Temperate Northern Pacific, Japan
Haliclona translucida Desqueyroux–Faúndez, 1990	Encrusting with thin, translucent patches (27 to 34 mm long, 14 to 21 mm wide and 1 to 5 mm thick); surface smooth, no visible membrane, finely hispid; oscula (1.5 to 2 mm in diameter), numerous and irregularly distributed; consistency soft; in vivo color is white to yellowish.	**Ectosome**: tangential arrangement. **Choanosome:** triangular to rectangular isotropic or isodictyal network, very regular, unispiculate, with very little colorless spongin at the angles. **Oxeas** with strongyles, straight, 94–116 x 6–7 μm.	Hanga Roa, basins at low tide.	Eastern Indo Pacifc, Easter Island
Haliclona ulreungia Sim & Byeon, 1989	Irregular, massive (5 x 3 x 1 cm); pores dispersed; Oscules (0.5 mm in diameter) slightly elevated with rims; Surface is smooth; texture is very soft and fragile; color in spirit is pale ivory.	**Ectosome**: specialized but not described. **Choanosome**: irregular reticulation. **Oxeas** 103–179 x 3–8um.	None provided	Temperate Northern Pacific, Sea of Japan, Korea
Haliclona uwaensis (Hoshino, 1981)	Encrusting, forming a small patch on the surface of host sponge; color ivory buff, when dry; consistency very soft to touch; Oscules and pores invisible.	**Ectosome**: not specialized. **Choanosome**: irregular coarse network of spiculo-fibers, 1-10 spicules, up to 30 μm in diameter. **Sigmas** C-shaped, 10-22 um and **toxa** (28 μm) scattered numerously. **Oxea** smooth, slightly arched, hastate 150-170-185×6-7.6-10 μm.	Subtidal zone growing on sponge	Temperate Northern Pacific, Japan

Table S2 continued

Species	External morphology	Skeleton morphology	Site description	Distribution
Haliclona venustina (Bergquist, 1961)	Encrusting to massive and depressed; surface uneven, glabrous (smooth); oscules numerous, subpapillate, (1–3 mm diameter); consistency firm; texture friable; color in life yellow, in spirit dull yellowish brown.	**Ectosome**: unispicular with mainly triangular mesh. **Choanosome**: isodictyal or sub–isodictyal, chiefly unispicular, but having occasional bispicular ascending fibers. **Oxeas** 100 x 4 μm	Noises islands, Rangitoto caves	Temperate Australasia, New Zealand
Haliclona (*Gellius*) *amboinensis* (Lévi, 1961)	Bulbous encrusting (6–12 mm thick, 5 cm high), digitate processes growing in massive clumps; color pale mauve, violet alive and grayish beige in ethanol; oscules (2–5 mm diameter) singly, on tibs of surface bulbs with raised membranous rim; porous with subdermal striations below surface membrane; texture harsh, brittle	**Ectosome:** tangential tract of oxeas, some protruding through singly through surface. **Choanosome:** multispicular paucispicular tracts, disorganized. **Oxeas** fusiform, sharp pointed slightly curved 175–212–230 x 7–11–14 μm; **sigmas** C shaped with round or centrangulate centers 9–15–17 x 1–2 μm	Shallow reefs	Western Indo-Pacific, Indian Ocean, East Africa, Australia
Haliclona (Gellius) *laubenfelsi* Van Soest & Hooper, 2020 sensu de Laubenfels (1950)	Encrusting, numerous oscules (3 mm diameter), raised 8–16 mm high. Fistular projections (15 mm long x 3 mm in diameter); colonies are "palm of hand" size and 1 cm thickness; color vivid violet alive; consistency soft and fragile; surface smooth, translucent dermis over extensive subdermal cavities; pores (30 μm diameter) are abundant, contractile.	**Ectosome**: spicules tangentially arranged, but in little more than one single layer. **Choanosome**: microcavernous, isodictyal reticulation of spicules. **Oxeas**: smooth 4 x 140 μm; **toxas** 60 x 1 μm	Shallow reefs on dead coral	Western Indo-Pacific, Caroline Islands, West Madagascar; Eastern Indo-Pacific Hawai'i,
Haliclona (*Gellius*) *loe* (This study)	Thickly encrusting (1-2 cm), spread laterally (16 cm) with light yellow cushions that have a brownish purple interior; oscules (2-6 mm diameter), rise 0.5 cm from base of sponge surface. uneven punctate surface, firm but crumbly consistency	**Ectosome**: not specialized. **Choanosome**: unispicular to paucispicular confused skeleton that becomes more unispicular and isodictyal closer to the surface. **Oxeas** straight and curved at the center with acerate tips 179–253 x 1–5– 9 μm; **Sigmas** are C-shaped, very abundant throughout the sponge tissue in a single size category 8.7–9.9–12.0 x 0.3–0.6–1.1	Pilings, shallow cryptic reef and lava tube communities	Eastern Indo-Pacific O'ahu, Hawai'i
Haliclona (*Gellius*) *microsigma* (Babic, 1922)	Irregular, massive, 6–7 cm tall. Oscula (6–8 mm in diameter) scattered. Surface outstanding needles, rough; Color orange brownish (in formol). The flagellum chambers are pear–shaped, up to 27 μm in diameter.	Skeleton are **oxeas** (200-240 x 5-10 μm); microscleres (**sigmas** 8-10 μm) present around openings, in dense rows in the dermal layer and epithelium of the ducts; scattered in the inner tissue.	Not described	Adriatic, Aegean, and Mediterranean Sea

Table S2 continued

Species	External morphology	Skeleton morphology	Site description	Distribution
Haliclona (*Gellius*) *patbergquistae* Van Soest & Hooper, 2020 sensu (Bergquist & Warne (1980))	Hemispherical, fragile oscular fistules arising from the upper surface; color in life pale purple on the upper surface white elsewhere; texture crisp and fragile; surface smooth with an obvious, regular dermal spicule reticulation.	**Ectosome**: regular, tangential, isodictyal reticulation with predominantly unispicular meshes. **Choanosome**: irregular isodictyal reticulation with unispicular to trispicular sides. Reticulation is interrupted by spicule tracts running at right angles to the surface. Individual tracts run for short distances only and are up to ten spicules wide. **Oxeas**, stout, slightly curved with conical or mucronate ends 305–343 x 12 μm; **sigmas** 11–14 μm	Takatu Channel, 15 m depth	Temperate Australasia, New Zealand
Haliclona (*Gellius*) *tenerrima* Burton, 1954	Thickly encrusting 1.3x1x0.1 cm; no visible oscula; consistency soft, fragile; surface even; color grayish alive, light drab in spirit	**Ectosome**: not specialized; **Choanosome**: irregularly sub–isodictyal (almost halichondroid) with triangular mesh, and with occasional fibers of 2 to 3 spicules width running to surface; **Oxeas** 280 x 7 μm, **toxas** 30 x 1 μm.	Lagoon, 8.5 m depth	Caribbean, Barbuda, Belize
Haliclona (*Halichoclona*) *cioniformis* (Lévi, 1956)	Massive hollow sponge fixed on strands resembles an Ascidian whose inhaling siphon would correspond to the osculum; color yellowish gray.	The Ectosome and Choanosome are equal, rounded and are united by a maze of polyspiculated fibers very loose and quite irregular. **Oxeas:**120–130 μm	SW Nossi Bé, 12 m depth	Western Indo-Pacific, Madagascar
Haliclona (*Halichoclona*) *mokuoloea* (de Laubenfels, 1950)	Massive (20 x 30 mm); surface very soft, punctiform; color yellow with red patches.	**Ectosome**: tangential over subdermal spaces. **Choanosome**: cavernous, isodictyal reticulation. **Oxeas:**120–135 x 6 μm	Moku o Loʻe, Kāneʻohe Bay	Eastern Indo-Pacific, Hawaiʻi
Haliclona (*Haliclona*) *tonggumiensis* (Kang et al., 2013)	Thinly encrusting (0.1 cm thick and 5 cm width); Oscules circular (0.1–0.2 cm in diameter), scattered on surface; color pink in life gradually changing to ivory in alcohol; texture soft, fragile and compressible; surface smooth and even; spongin moderate to abundant, yellowish, and clearly visible.	**Ectosome**: unispicular reticulation under membrane with pores, and single oxea slightly hispid to outer surface. Skeleton in thin surface membrane absent. **Choanosome**: composed of ladder–like reticulation by uni–paucispicular primary lines and regularly connected by unispicular secondary lines **Oxeas** fusiform thick, straight to slightly arched or bent at middle 60– 110 x 1– 5 μm.	3 m depth	Temperate Northern Pacific, Korea

Table S2 continued

Species	External morphology	Skeleton morphology	Site description	Distribution
Haliclona (*Haliclona*) *ieoensis* Kim et al., 2017	Encrusting, irregularly massive (1.6 cm in thickness and 5 cm in width); oscules flush on surface, chimney, and volcano shaped elevations (0.3–0.5 cm in height and 4.5 cm in diameter); color beige in life, ivory in alcohol; texture soft, fragile, compressible; surface smooth and even.	**Ectosome**: not specialized, unispicular reticulation. **Choanosome**: skeleton composed of ladder–like reticulation by uni–paucispicular primary lines regularly connected by unispicular secondary lines. **Oxeas** 160– 230 x 2.5–12.5 μm.	Ieodo, 6–20 m depth	Temperate Northern Pacific, East China Sea
Haliclona (*Reniera*) *kahoe* (This study)	Thin to thickly encrusting with erecting regular to irregular oscular lobes; spread laterally (1–4 cm in length, width of ≤1 cm and a thickness up to 0.5 cm). Oscula (1–3 mm in diameter) rise 0.5 cm in height. Surface smooth, even, and occasionally irregular with few microscopic pores Consistency is soft, delicate, compressible, and easily torn. Color in alive ranges from light brown, light purple to greyish yellow.	**Ectosome:** ill defined but can be an isotropic unispicular, isodictyal reticulation of oxeas. **Choanosome:** varies from disorganized to isotropic to subisotropic reticulation forming meshes similar in size and shape to those found in the Ectosome. Spongin and small auxiliary oxeas is scattered sporadically. **Oxeas** straight and slightly curved with acerate tips measuring 154–197 x 1– 9 μm.	Shallow cryptic reef community	Eastern Indo-Pacific, Kāneʻohe Bay, Oʻahu, Hawaiʻi
Haliclona (*Reniera*) *oberi* Sim–Smith et al., 2021	Thinly encrusting (3 mm thick); oscules (3 mm in diameter) slightly raised, translucent margins; surface punctate; color in life is light pink apricot, color in ethanol is tan; texture is extremely soft, delicate, and easily torn; spongin at nodes of reticulation	**Ectosome**: single layer of unispicular, isotropic reticulation. **Choanosome**: unispicular, isotropic reticulation, paucispicular tracts. **Oxeas** 118–135–154 x 7–9–12 μm.	Small recess on vertical rock wall, 18 m depth	Tropical Eastern Pacific, Galápagos
Haliclona (*Reniera*) *parvuloxea* Bispo, et al., 2022	Encrusting, with abundant, short, up to 5 mm high, cylindrical, or irregular, frequently bifurcate, lobate projections; several blind fistules present; oscula (0.4–1.3 mm in diameter) circular, apical; surface smooth, shiny out of water; consistency soft; color in life yellow. Spongin at nodes of reticulation	**Ectosome:** isodictyal to isotopic, unispicular reticulation. **Choanosome**: isotropic, unispicular reticulation, more regular in some parts, isodictyal in others somewhat disorganized. Mesohyl heavily pigmented. of the reticulation when present. **Oxeas** slender, subtly bent at center, short acerate points 62–80–91 x 1.0–2.5–4.0 μm	Intertidal on mangroves	Temperate South America, Perú
Haliclona (*Reniera*) *phlox* (de Laubenfels, 1954)	Encrusting (2 mm thick x 1–2 cm long); color in life bright orange; consistency soft, slimy; surface is usually smooth, lumpy, lipostomous.	**Ectosome**: thin fleshy dermis. **Choanosome**: disorganized, irregular reticulation of vague tracts (two spicules per cross section), connected by spongin. **Strongyles** 470 x 7 μm	Ailing–lap–lap Atoll; Enemanok Islet; Likiep Atoll, 2–3 m in depth	Eastern Indo-Pacific, Marshall Islands

Table S2 continued

Species	External morphology	Skeleton morphology	Site description	Distribution
Haliclona (*Reniera*) *venusta* (Bowerbank, 1875)	Encrusting (4 cm breadth x <2.5 cm height) with stout fistula (320 µm); surface smooth and even; oscula simple, within the fistula; pores inconspicuous; color pale ochreous yellow in the dried state.	**Ectosome**: pellucid, abundantly spiculous, reticulated; rete unispicular, very regular (continuous and symmetrical), areas mostly triangular, rarely quadrangular. **Choanosome**: rete very diffuse and irregular; fibers slender and compact; unispicular reticulated structure, fibrous skeleton meanders in various directions. **Oxeas** dimensions not reported	Straight of Malacca	Central Indo-Pacific, Malay Peninsula
Haliclona (*Reniera*) *aquaeductus* (Schmidt, 1862)	Cushion shaped, encrusting (0.5–1.5 cm thick), laterally spreading (15 cm), masses of anastomosing slender branches loosely attached to the substratum, or clusters of tubes; tendency to form long, thin, blind–ending proliferations (5–7 mm high); oscula (1–3 mm in diameter) at the end of chimneys, or flush with the surface; consistency soft, delicate, compressible but fragile to moderately firm; produces slime when torn; color commonly bright, purple, violet, orange and yellow; surface smooth, even; spongin only at nodes.	**Ectosome:** if present, a regular, tangential, unispicular, isotropic, reticulation. **Choanosome**: delicate, regular, unispicular, isotropic reticulation without clear distinction between primary and secondary lines. **Oxeas** blunt pointed, strongylote, 145–175 µm x 6–8 µm	Mediterranean, Azores, hard substratum, 5–35 m depth	Temperate Northern Atlantic, Central Indo-Pacific, Mediterranean, Adriatic, Black and Aegean Sea
Haliclona (*Reniera*) *cinerea* (Grant, 1826)	Cushion (1 x 2.5 x 1 cm); Oscula not visible; color light greyish brown to black; texture fragile; surface smooth	**Ectosome**: very regular, tangential, unispicular, isotropic reticulation. **Choanosome:** very regular and isotropic. Spongin at nodes. **Oxeas** short, rather fat, cigar–shaped, with many stylote modifications (76.8–100.3–112.8 µm / 4.8–7.6–10.3 µm)	Shallow intertidal < 1m depth	Mediterranean, Northeast Atlantic, Eastern Indo-Pacific, Hawai‘i
Haliclona (*Reniera*) *clathrata* (Dendy, 1895)	Massively encrusting (6 x 4 x 2.8 cm); oscules (1–4 mm high) elevated broadly; color alive yellow–brown, mauve and in alcohol, fawn to grey; texture soft and friable. Thick specimens are more elastic; surface smooth and even, faintly hispid, with a punctate appearance; oscules (0.5–2.0 mm in diameter), abundant, elevated on conical or monticular turrets. Dermal membrane is extremely porous and is deposited like a veil on the topmost meshes of the skeleton.	**Ectosome**: no specialization. **Choanosome**: dense, irregular unispicular reticulation. Multispicular ascending fibers. Multispicular brushes transverse the surface. **Oxeas** fusiform to slightly curved with acerate tips 107 x 6 µm	Queen Charlotte Sound, 6–20 m in depth	Temperate Australasia, New Zealand, Australia

Table S2 continued

Species	External morphology	Skeleton morphology	Site description	Distribution
Haliclona (*Rhizoniera*) *australis* (Lendenfeld, 1888)	Massively encrusting, lobose, horizontally extended, (3 x 10 x 20 cm), with dome-shaped protuberances on the upper surface; oscula (3-5 mm wide) situated on summit; surface smooth. Color alive rosy, red, in spirit grey.	**Ectosome**: not described. **Choanosome**: longitudinal fibers (0.02 mm thick), composed of 3-5 loosely packed spicules. Between these fibers a very dense network of irregularly scattered oxeas. **Oxeas**, straight, sharp, and somewhat abruptly pointed 120 x 4 μm.	None provided.	Western Indo-Pacific, East coast of Australia
Haliclona (*Rhizoniera*) *curacaoensis* Van Soest, 1980 (sensu De Weerdt, (2000) Adapted from Table 2 in Bispo et al., (2014)	Encrusting base with close-packed oscula (2-4 cm high and 2-3 cm in diameter) mounds Consistency soft, easily torn. Surface smooth, punctate, sticky, produces mucous when rubbed. Color alive bluish purple.	**Ectosome**: absent, or consisting of vaguely strewn, tangentially oriented. spicules **Choanosome**: irregular, paucispicular, somewhat sinuous, primary lines, irregularly connected by unispicular secondary lines. Many Choanosomal meshes. Nodal spongin. **Oxeas**, slender, with acerate to conical points, slightly to strongly curved (78-146 x 2.8- 5.7 μm)	0-58 m depth	South Atlantic bight, Caribbean
Haliclona (*Rhizoniera) enamela* de Laubenfels, 1930	Encrusting (1–2 mm thick), lumpy spreading laterally; surface punctate, verrucose; oscules (1–1.5 mm in diameter) raised white collars, 1 cm distance apart; consistency, spongy, soft, friable; color in spirit and alive drab.	**Ectosome**: vague or lacking. **Choanosome**: fibrous reticulation, meshes rectangular (75–125 μm in diameter, somewhat symmetrical, but numerous spicules not in the fibers strewn in confusion. Ascending fibers, (15–25 μm in diameter), cored by 6 to 8 rows of spicules: spongin pale. Accessory or transverse fibers (5–10 μm in diameter), cored by 1 to 2 rows of spicules. **Oxeas** 120 x 4 μm	Laguna Beach, intertidal	Temperate Northern Pacific, California
Haliclona (*Rhizoniera*) *fugidia* Muricy et al., 2015	Thickly encrusting to massive (3–8 x 1–2 cm), irregular; color brownish pink to light salmon alive, cream to light brown in spirit; oscules (1–3 mm in diameter) circular, randomly dispersed, with slightly elevated rims; surface irregular, uneven, with a few superficial channels; pores abundant, closely spaced, clearly visible on the surface, 20–60 μm in diameter; consistency compressible, slightly elastic.	**Ectosome**: not specialized. Surface lightly reinforced by spongin, with dispersed debris and few oxeas at the extremities of the Choanosomal primary tracts, which slightly surpass the surface. Sub ectosomal and choanosomal lacunae common. Reticulation is more organized and ladder-like near the surface and becomes denser and more disorganized towards the Choanosome. **Choanosome**: a ladder-like reticulation of uni- to paucispicular tracts of **oxeas** (78-126 x 1.3-5.2 μm), connected by irregular unispicular secondary lines, forming irregular or rectangular meshes 60–150 μm wide. Spongin is scarce.	Rio de Janeiro, 4 m depth	Tropical Atlantic, Brazil

Table S2 continued

Species	External morphology	Skeleton morphology	Site description	Distribution
Haliclona (*Rhizoniera*) *manglarensis* Bispo et al., 2022	Encrusting with abundant lobate projections, up to 3 cm high, cylindrical, or irregular, frequently bifurcate; oscula circular (2–5 mm in diameter), apical, lateral, or basal on the lobate projections; surface rough, velvety out of water; consistency soft and bristly; color in life olive, becoming lighter and yellowish, towards the lobes' apices.	**Ectosome**: not specialized. **Choanosome**: confused, unispicular, isotropic reticulation in the deeper parts, becoming more anisotropic close to the surface, with ill-defined uni- to bispicular primary lines irregularly connected by unispicular secondary lines. Abundant small auxiliary oxeas. Pigmented, brownish. Spongin not visible. **Oxeas**, slender, subtly bent at center, long acerate points (92–120–140 x 1.0–3.8– 6.0 μm)	Intertidal, mangrove roots	Eastern Pacific, Peru
Haliclona (*Rhizoniera*) *pahua* (This study)	Thickly encrusting (<1 cm in height and diameter) solitary, circular, mounds; oscules circular 0.5–1 mm wide flush with surface; surface smooth, slightly hispid, somewhat punctate. Color of live specimen varies from light to darker shades of brown. Consistency compressible with delicate elasticity.	**Ectosome**: not specialized. **Choanosome**: unispicular, mainly anisotropic where primary lines are connected irregularly by secondary lines in ladder like pattern. Can be disorganized in areas of the Choanosome where the skeleton is subisotropic with isodictyal reticulation. Secondary lines are absent at the surface forming a hispid projection of 1-3 oxeas. **Oxeas** straight and curved at the center with hastate tips 75–129–151 x 3–4.1–5 μm	Shallow cryptic reef community	Eastern Indo-Pacific Kāneʻohe Bay on the island of Oʻahu, Hawaiʻi
Haliclona (*Rhizoniera*) *viscosa* (Topsent, 1888)	Thickly encrusting to massive (30-40 cm diameter and 1.5-5 cm in height), chimney or volcano shaped osculiferous elevations; oscules (1-5 mm in diameter) large in number and situated in series atop of isolated or fused elevations; consistency firm, but very friable, extremely slimy; surface punctate, smooth, but somewhat irregular caused by ridges and grooves; color: greyish purple, commonly verging to yellow towards the base, turns black when exposed to air.	**Ectosome**: not specialized, but spicules of the primary lines project through the dermal membrane. **Choanosome**: rather close meshed, with pauci-multispicular primary and unispicular secondary lines and with many spicules in confusion. There are many Choanosomal spaces. Spongin is scarce, and nodal. Spicules: rather slender and fusiform **oxeas** (110-150 x 3-7.5 μm)	Infralittoral to 50 m on vertical or horizontal sides of rocks, exposed to strong current and low turbidity	Northeast Atlantic
Haliclona (*Rhizoniera*) *zanabriai* Bispo et al., 2022	Thickly (5–9 mm thick) encrusting specimen irregularly sprawling (>30 cm diameter); cushion-shaped habit, short lobate projections, or small ridges; surface punctate and flat; oscula (1–2 mm in diameter) abundant, circular, mostly flush with the surface; color alive light brown; surface somewhat punctate; consistency soft, compressible.	**Ectosome**: not specialized. **Choanosome**: anisotropic reticulation with ascending, somewhat regular, primary uni- to paucispicular tracts (1–5 spicules thick), connected by mostly unispicular secondary tracts in varied angles of attachment; overall construction quite loose. Large lacunae present, up to 300 μm in diam., and a few, likely younger spicules, scattered all around. Spongin scarce, at the nodes of the reticulation. **Oxeas** (79–123–163 x 1.0–5.1–9.0 μm), fusiform, straight, or more frequently subtly bent at center, long acerate points	Shallow rocky subtidal- rocky- up to 20m	Eastern Pacific, Peru

Table S3: Summary of morphological data of known *Gelliodes* spp. sharing similar characters to *Gelliodes conulosa*.

Species	External morphology	Skeleton morphology	Site description	Distribution
Gelliodes callista de Laubenfels, 1954b	Sprawling ramose, branches 3 to 4 cm in diameter and 21 cm long; oscules 4–7 mm diameter and 6–7 cm apart. Color is pinkish orange; consistency is spongy; surface is conulose 93–4 mm high and 5-6 mm apart.	**Ectosome**: tangential spicular reticulation not specialized. **Choanosome**: fibroreticulate; fibers (40–140 μm in diameter) crowded with spicules with sponging create triangular and polygonal meshes. **Oxeas** (140 x 6 μm) hastate. **Sigmas** 16 μm in length.	On dead coral; 2 m depth	Central Indo-Pacific; Ulebsechel Island Palau
Gelliodes fibrosa Dendy, 1905	Irregular shape, cavernous structure with large exhalant canals and vents; very soft fibrous texture	Skeleton not described. Presence of sigmas and oxeas but measurements not provided	Deep water off Gale and onwards up West Coast of Ceylon	Western Indo-Pacific; South Indian Shelf; Sri Lanka
Gelliodes fibrosa Dendy, 1905 sensu de Laubenfels (1935)	Small cavernous mass (3 x 4 mm). Color of exterior is blue gray, paler gray interior (in alcohol. Consistency is spongy.	**Ectosome**: membranous sheet, transparent contains tangentially placed oxeas. Choanosome: cavernous with chambers (6 mm in diameter) elongate meandering through the interior. Fibrous architecture with fibers measuring 60 –160 μm in diameter forming meshes (700 – 2,000 μm in diameter). Auxiliary fibers are half the thickness of main fibers which inclose meshes (40–60 μm in diameter). **Oxeas**: 150–90 x 4–6 μm. **Sigmas**: 11–22 x 2 μm	Near the marine biological station 12 m deep	Central Indo-Pacific; Puerto Galera bay, Mindoro Island, Philippine Islands
Gelliodes obtusa Hentschel, 1912	Lobed branches (15 cm high and 1 cm wide). Oscula (10 mm in diameter) one sided; Color light gray (alive), brownish tones (dull); Surface conulose but also smooth over long stretches.	**Ectosome:** not specialized. **Choanosome:** Irregular ascending and branching fibers (80 μm in diameter). Ends are connected by fibers that run parallel (ladder shaped). Fibers radiate into needle bundles outwards from surface. Fibers rich in spongin and mostly contain one oxea. **Oxeas** (144–168 x 6 μm) slender, curved, short-pointed. **Sigmas** (15 x 1 μm) very slender, wide open, ends curved.	3–4 m depth	Central Indo-Pacific; Banda Sea Kai Island, Nuhu Tawun
Gelliodes petrosioides Dendy, 1905	Massive, depressed cushion-shaped (2.4 cm diameter); Oscula not visible. Pores are numerous, scattered in thin dermal membrane. Surface coarsely granular, not hispid. Color (in spirit) pale yellowish grey. Texture compact, hard, stony.	**Ectosome:** not specialized. Irregular reticulation of coarse specular fibers with interspaces occupied by a thin, pore-bearing dermal membrane. **Choanosome**: Dense, irregular reticulation, coarse, stout, densely spicular fiber (164 μm in diameter)with megascleres scattered between. **Oxeas** and **Sigmas** present but dimensions not provided.	None provided	Western Indo-Pacific; South India, Sri Lanka

Table S3 continued

Species	External morphology	Skeleton morphology	Site description	Distribution
Gelliodes porosa Thiele, 1903	Cylindrical, or wart shaped high process rises oscula (3–4 mm in diameter). Color is brown. Surface is smooth, not papillose.	**Ectosome**: Fine network between dense pores and Choanosomal canals. **Choanosome**: irregular network of needle tracts (60 µm in diameter). **Oxeas** (160 x 11 µm) short, strong, spindle-shaped, separated sharp tips on both sides. **Sigmas** (13 µm long) numerous in the parenchyma.	None provided	Central Indo-Pacific; Indonesia, Sulawesi Sea, Makassar Straight.
Gelliodes spinosella Thiele, 1899	Club or cone shaped processes that rise from a flat base. Apical oscula (3–10 mm diameter). Surface numerous pointed papillae, color is brown (in spirit)	**Ectosome:** not specialized. **Choanosome**: dense irregular network of fibers (100 µm in diameter) present below subdermal cavity (100–200 µm deep) and rise perpendicular to the surface. Granular cells (7 µm in diameter). **Oxeas** (150 x 7 µm). **Sigmas** (22 µm long).	None provided	Central Indo-Pacific Indonesia, Sulawesi Sea, Makassar Straight.
Gelliodes truncata (Kieschnick, 1896)	Branched sponge. Soft surface with numerous pores. Color brown.	Horny fiber network. Presence of sigmas and oxeas but measurements not provided	None provided	Central Indo-Pacific, Halmahera
Gelliodes licheniformis (Lamarck, 1814)	Loose, smooth with coarsely reticulated fibers. Mases form tufts spreading low and lichenoid	Irregular network of reticulated fibers.	None provided.	Southern Atlantic Ocean, Tristan and Gough
Gellius varius fibrosus Wilson (1925) And added observations in this study	Branching not exceeding 5 cm in height. We add: erect cylindrical, branching and anastomising morphology. Oscula are numerous of similar size, evenly distributed and flush with the surface. Surface is even. Color is brown (in spirit)	Skeleton is renieroid with well pronounced multispiculous primary radial lines. **Oxeas** (220 x 14 µm). **Sigmas** (25 µm long).	None provided.	Central Indo-Pacific, Gulf of Tomini
Gelliodes wilsoni Carballo et al., 2013	Encrusting to massive, lobulate, cushion-shaped or branching with a diameter of 2x12 cm and thickness of 2x5 cm. Oscules (1–2.5 cm in diameter) abundant, elevated 5–12 mm and scattered 1–3 cm apart. Surface even, conulose. Color alive dark blue, black/grey, dull yellow and in spirit pale brown.	**Ectosome:** paratangential network of secondary multispicular fibers, interrupted by primary fibers protruding from the Choanosome to form spines. Ectosomesomal irregular rounded mesh 100 – 300 µm in diameter. **Choanosome**: Reticulum of ascending multispicular primary fibers (70 – 145 µm in diameter) connected by multispicular secondary fibers (30 – 65 µm in diameter). Choanosomal spaces measure 100 – 500 µm in diameter. SubEctosomesomal canals 650–800 µm in diameter **Oxeas** (120 – 185 µm x 1.25–5 µm). **Sigmas** (1.5 – 25 µm long) in a single category.	Artificial structures and coral reefs in shallow water (<10 m)	Eastern Pacific, Mexico; Central Pacific, Palmyra Atoll; Eastern Indo-Pacific, Hawai‘i

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