

PLATE 1. *Fungiacyathus stephanus* (a-c, NZOI Stn U197, USNM 93985): a-c, oblique calicular, basal, and edge views of same corallum, all x 1.3. *Fungiacyathus fragilis* (d, f, *Eltanin* Stn 1412, USNM 47536; e, *Eltanin* Stn 1846, USNM 47537): d, f, sinuous septa, x 2.6, x 4.5, respectively; e, basal view of costae, x 2.2. *Fungiacyathus pusillus pacificus* (g-i, holotype; l, paratype, NZOI Stn I97, USNM 93974): g, i, oblique calicular, basal, and edge views, all x 3.1; l, broken corallum revealing ridges on septal face, x 3.2. *Fungiacyathus marenzelleri* (j-k, NZOI Stn J667, USNM 93976): oblique calicular and basal views of costae, both x 1.5.

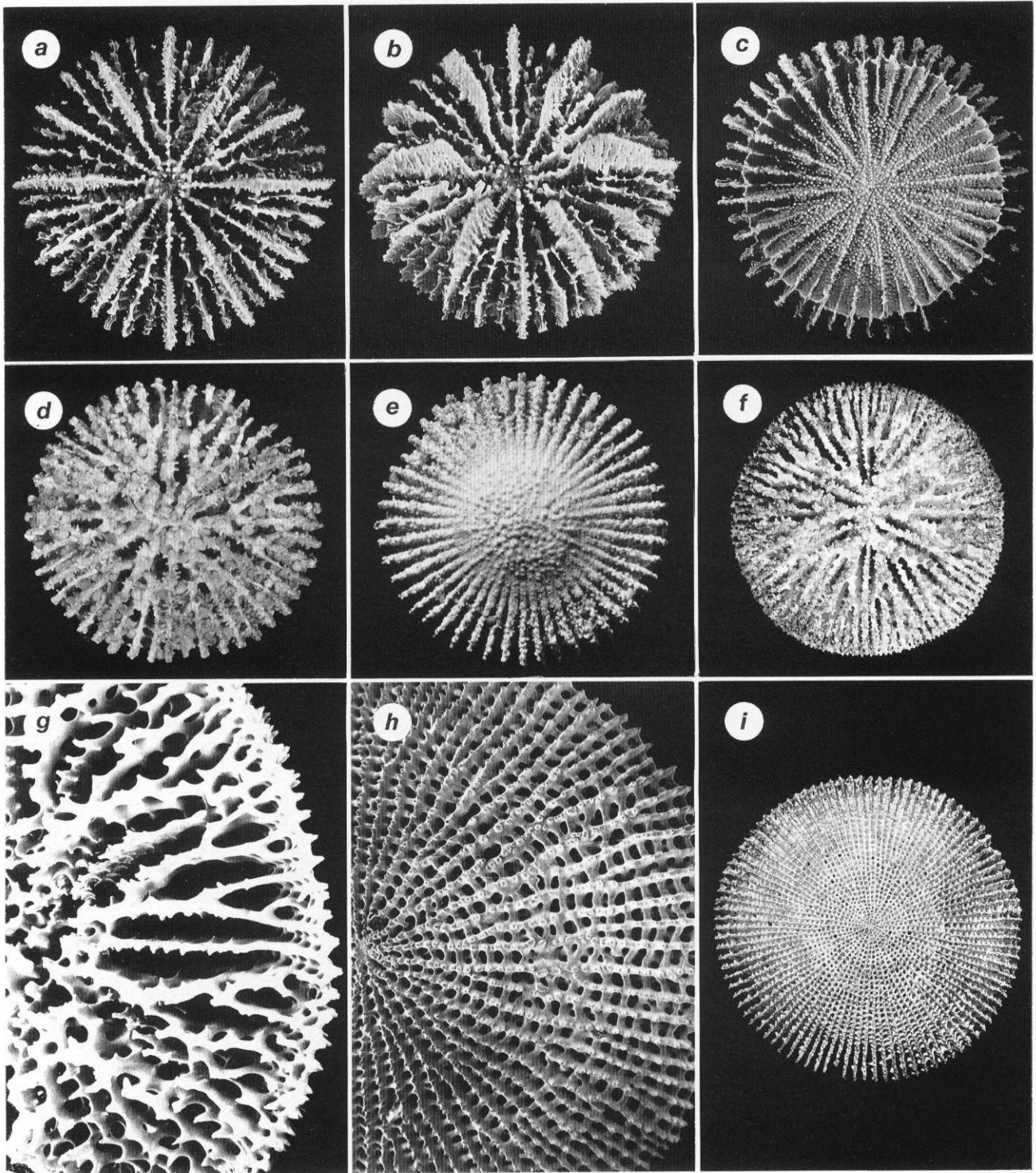


PLATE 2. *Fungiacyathus margaretae* (a-c, holotype): a-c, calicular, oblique calicular, and basal views of holotype, all $\times 3.2$. *Fungiacyathus turbinolioides* (d-e, NZOI Stn E868, USNM 93981): d-e, calicular and basal views of a worn corallum, both $\times 8.7$. *Letepsammia superstes* (f, NZOI Stn K795, USNM 94080; g-h, NZOI, Stn K838, USNM 94081; i, NZOI Stn K840, USNM 94082): f, i, calicular and basal views of a corallum, $\times 2.8$, $\times 3.0$, respectively; g-h, detail of septa and costal granulation, $\times 10.5$, $\times 9.5$, respectively.

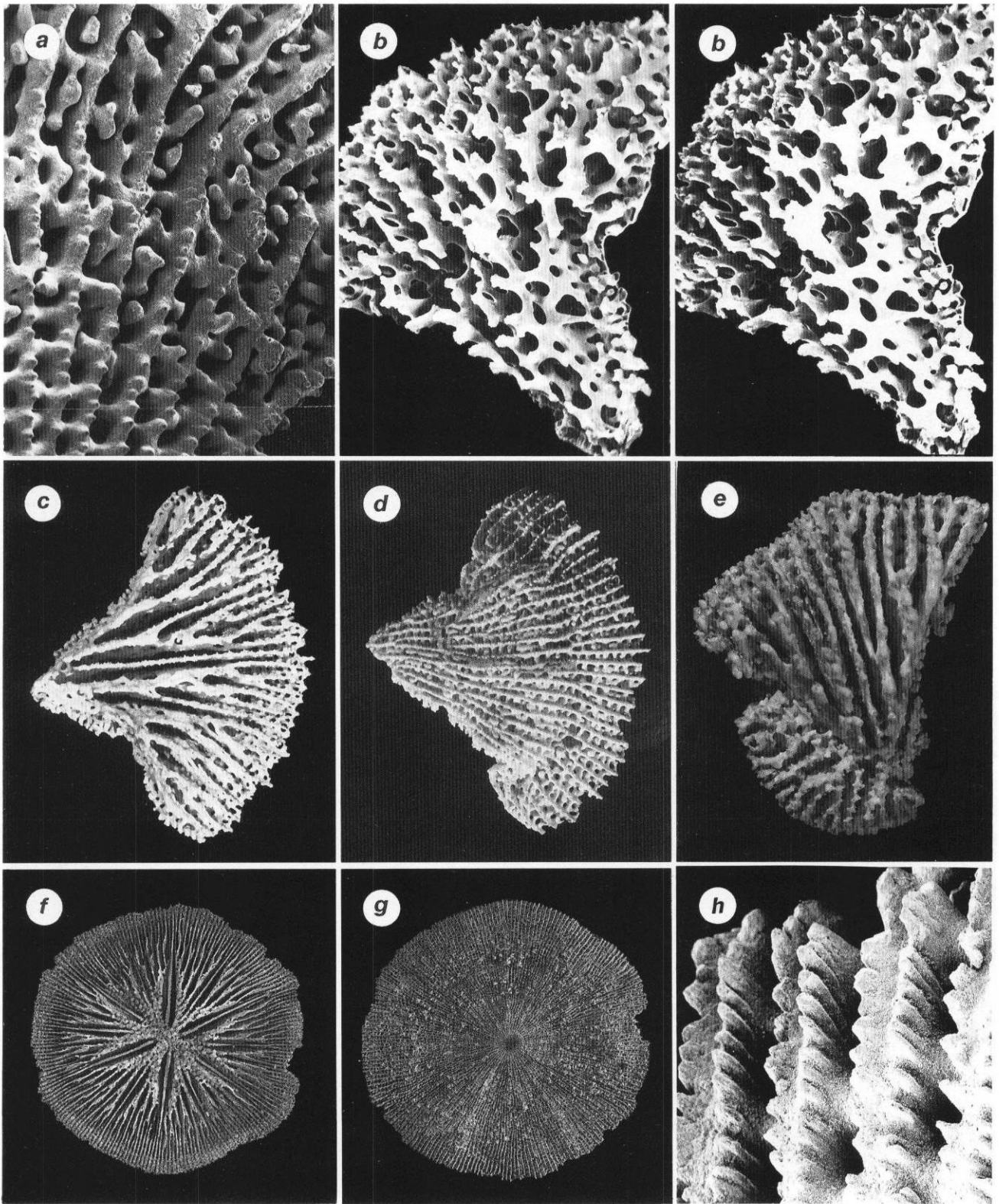


PLATE 3. *Letepsammia fissilis* (a-d, BS833, MNZ CO833; e, BS833, MoNZ CO287): a, costal granulation, x 22; b, stereo view of corallum fragment, x 10.5; c-d, calicular and basal views of holotype, x 3.5; e, regenerated corallum fragment, x 6.2. *Letepsammia formosissima* (f-g, BS888, MoNZ): f-g, calicular and basal views of same corallum, both x 1.2. *Stephanophyllia complicata* (h, NZOI Stn U584, USNM 94079): h, costae at edge of corallum, x 47.

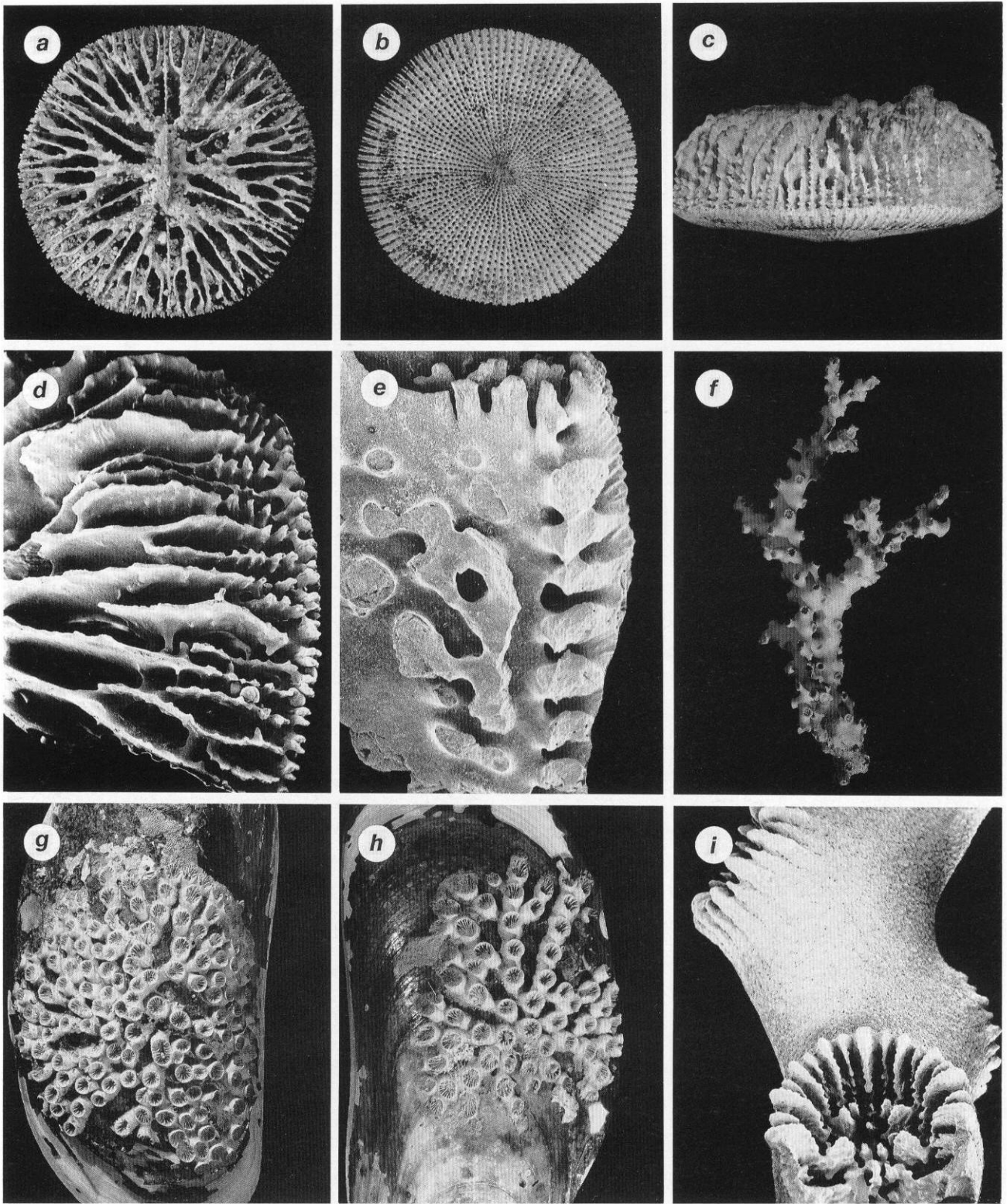


PLATE 4. *Stephanophyllia complicata* (a, d-e, NZOI Stn U584, USNM 94079; b-c, NZOI Stn P14, USNM 94078): a-c, calicular, basal, and edge views of coralla, x 2.8, x 3.5, x 4.2, respectively; d, arrangement of septa at calicular edge, x 10; e, longitudinal fracture revealing serially arranged synapticalae and futuratae on septal face, x 21. *Oculina virgosa* (f, i, AU 9129, H1200): f, colony, x 0.5; i, branch fragment, x 10.5. *Culicia rubeola* (g-h, AU 140, H1201): g-h, symmetrically radiating coralla encrusting valves of *Perna canaliculus*, both x 0.8.

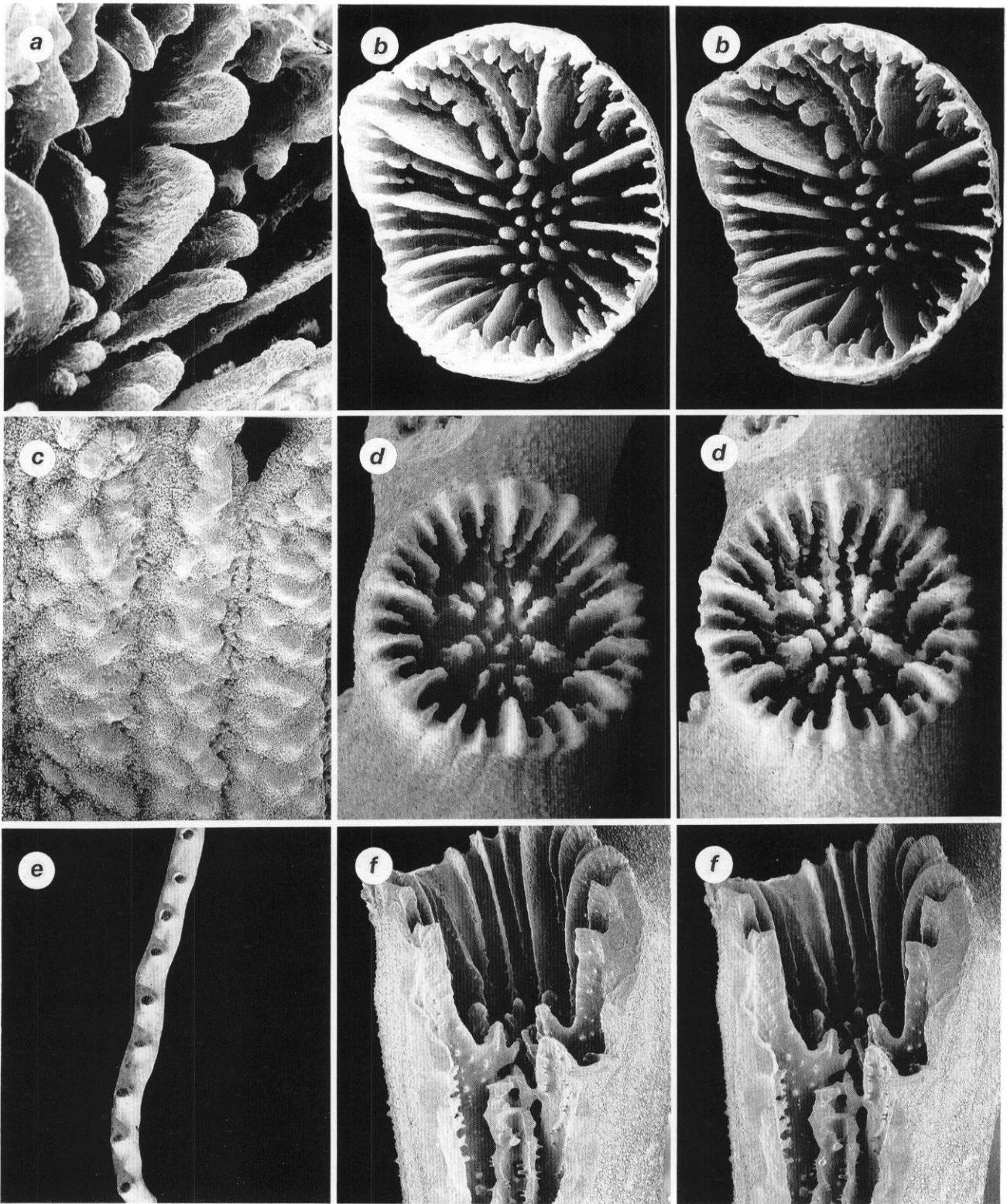


PLATE 5. *Culicia rubeola* (a-b, NZOI Stn M793, USNM 94000): a, coarse septal lobation, x 39.5; b, stereo view of a calice, x 12.2. *Oculina virgosa* (c-d, AU 9129): c, costal granulation near calice, x 54; d, stereo view of a calice having 8 pali, x 14.5. *Madrepora oculata* (e, NZOI Stn C642, USNM 47514; f, NZOI Stn B314, USNM 93986): e, branch fragment, x 1.1; f, stereo view of longitudinally fractured corallum revealing columella and pali, x 18.

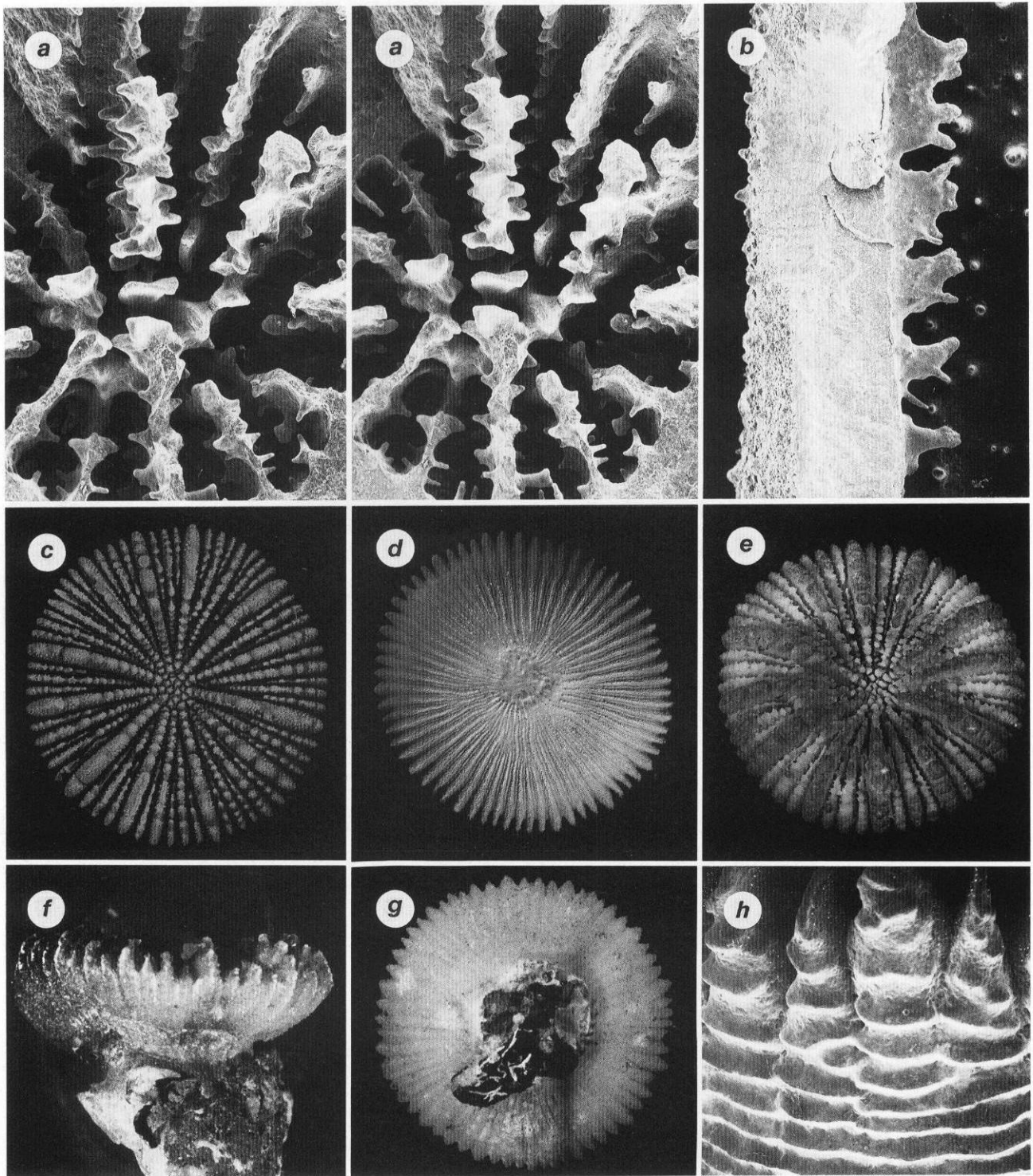


PLATE 6. *Madrepora oculata* (a, NZOI Stn U594, USNM 93988; b, NZOI Stn B314, USNM 93986): a, stereo view of a calice showing prominent septal granules, x 60; b, cross section of theca (left) and a rudimentary S3, x 78. *Anthemiphyllia dentata* (c-d, f-g, BS441, MoNZ; e, NZOI Stn T217, USNM 93994): c-d, calicular and basal view of same corallum, both x 2.7; e, calicular view, x 22; f-g, side and basal views of attached specimen, x 5.4, x 5.6, respectively. *Caryophyllia rugosa* (h, NZOI C530, USNM 94005): h, transversely ridged theca near calice, x 39.

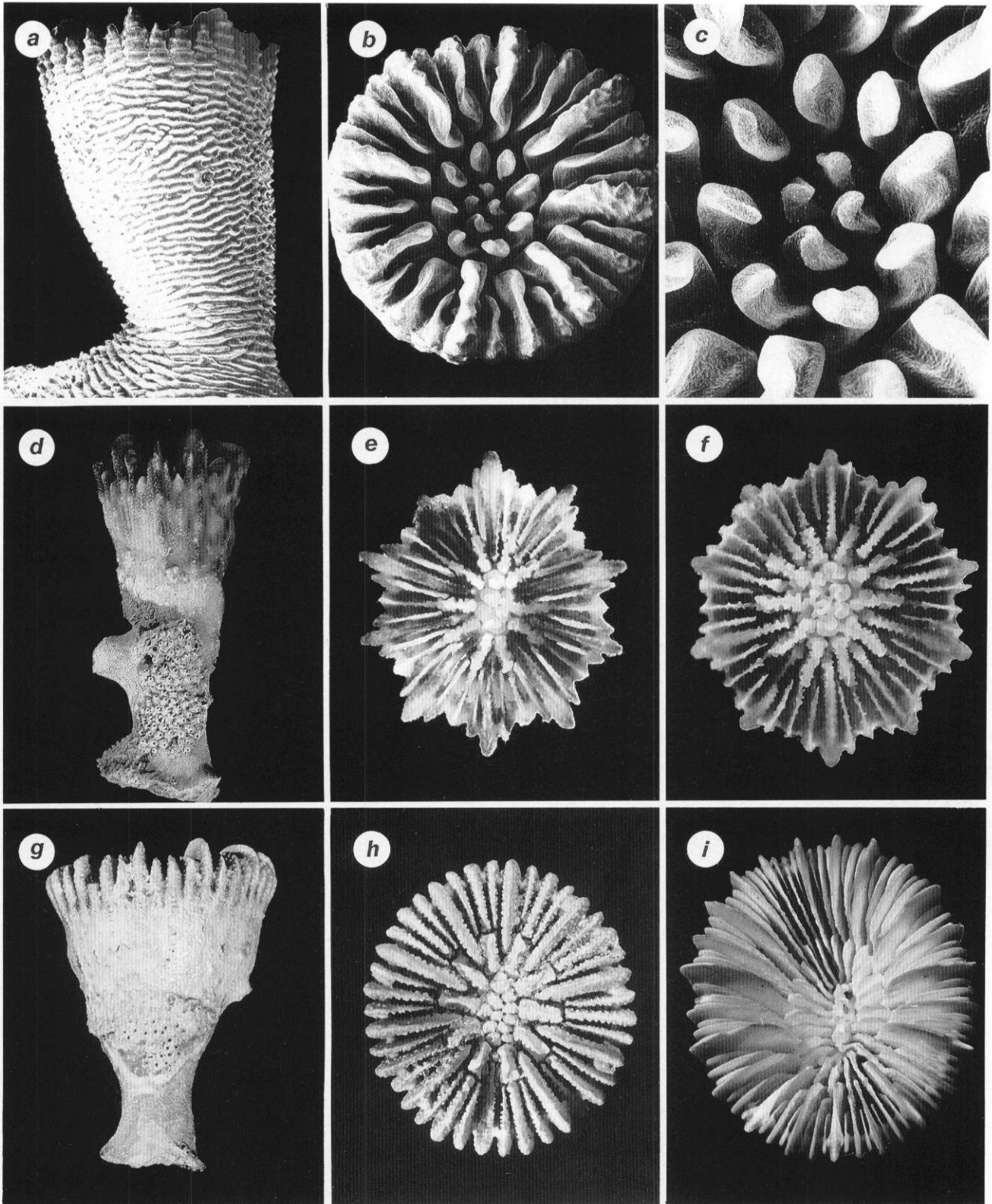


PLATE 7. *Caryophyllia rugosa* (a-c, NZOI Stn C530, USNM 95005): a, theca illustrating transverse costal ridges, x 10; b-c, calice illustrating sinuous septa, pali, and columella, x 14, x 35, respectively. *Caryophyllia hawaiiensis* (d-e, NZOI Stn P115, USNM 94013; f, syntype from Albatross Stn 3838, USNM 20750): d-e, side and calicular views of same specimen, x 2.4, x 5.0, respectively; f, calicular view, x 8.6. *Caryophyllia quadragenaria* (g-h, NZOI Stn C776, USNM 94007): g-h, side and calicular views of same specimen, x 4.6, x 5.4, respectively. *Caryophyllia profunda* (i, syntype from Challenger Stn 135, BM(NH) 1880.11.25.36): i, oblique calicular view, x 2.3.

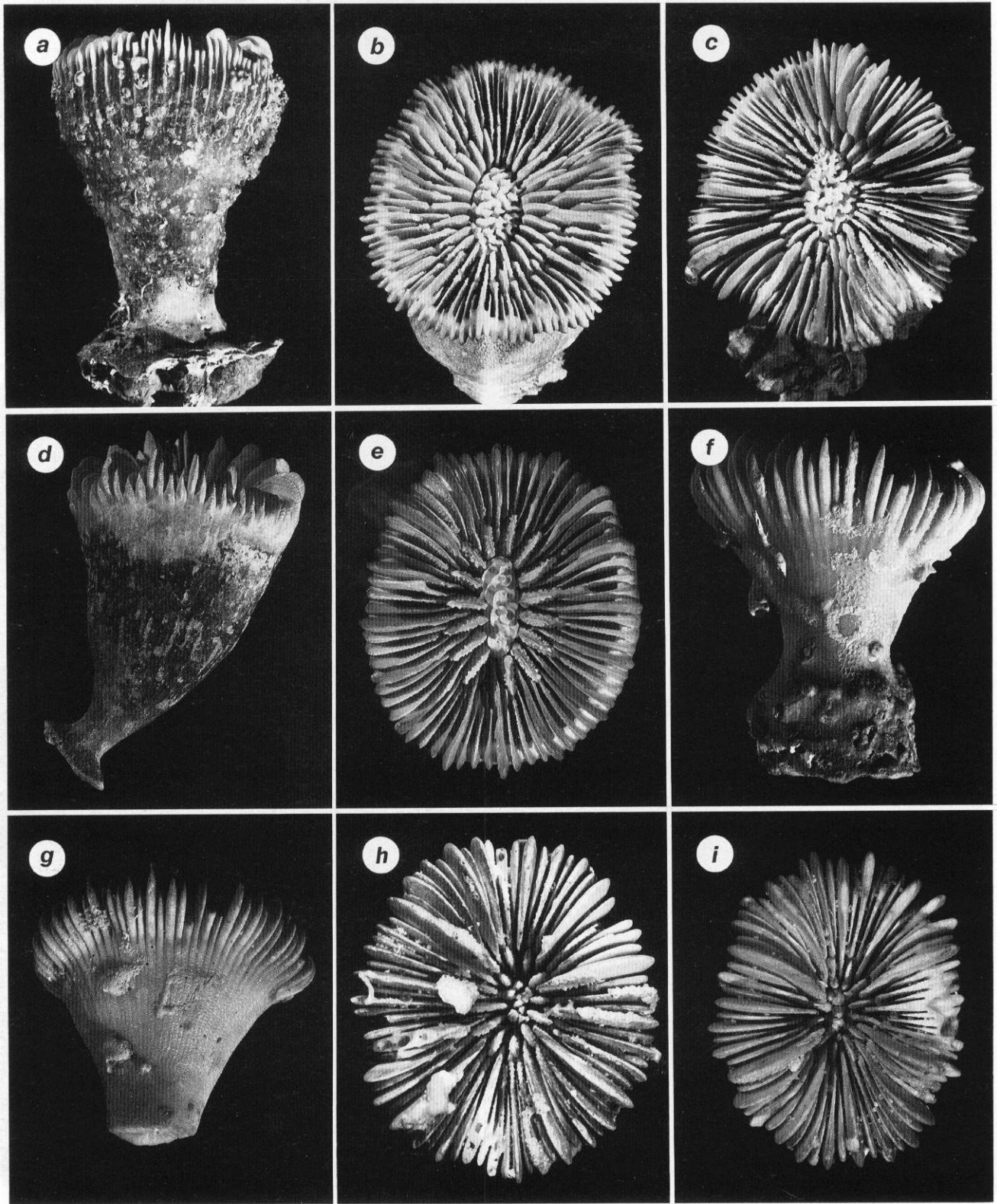


PLATE 8. *Caryophyllia profunda* (a, NZOI Stn E751, USNM 94020; b, NZOI Stn D876, USNM 94019; c, NZOI Stn M782, USNM 94039): a, side view, x 1.2; b-c, calicular views of different specimens, x 1.4, x 1.5, respectively. *Caryophyllia atlantica* (d-e, *Eltanin* Stn 1712, USNM 94022): d-e, side and calicular views of same specimen, x 1.5, x 2.0, respectively. *Caryophyllia ralphae* (f, i, holotype; g-h, paratype, *Franklin* Stn 5/89/40, AMS, G15500): f-g, side views, x 1.7, x 1.8, respectively; h-i, calicular views, x 1.8, x 1.5, respectively.

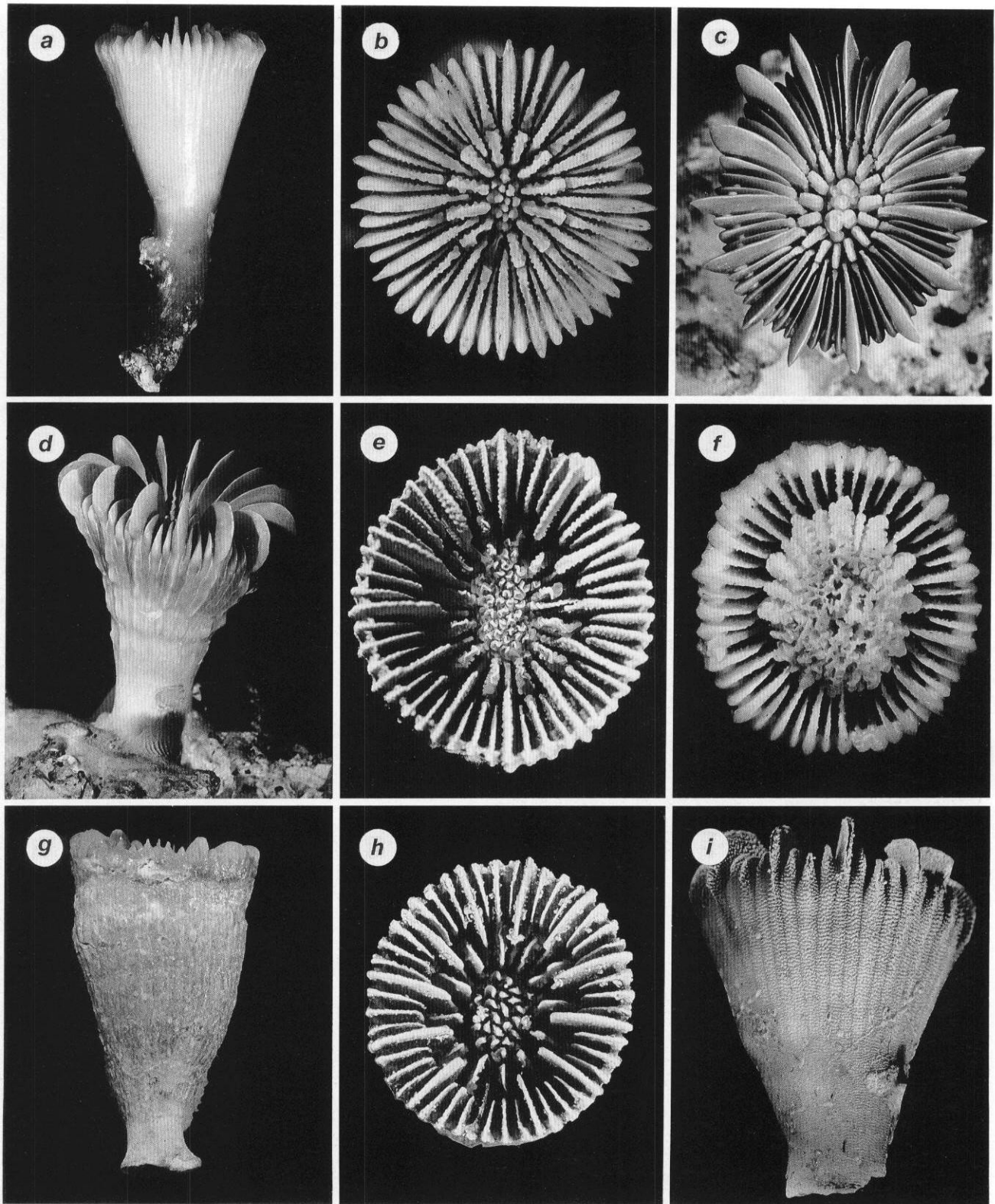


PLATE 9. *Caryophyllia diomedea* (a-b, NZOI P946, USNM 94057; c-d, *Eltanin* Stn 1403, USNM 47518): a-b, side and calicular views of specimen with porcellanous theca, $\times 1.7$, $\times 3.3$, respectively; c-d, calicular and side views of a specimen with 14 pali, $\times 2.0$, $\times 1.4$, respectively. *Caryophyllia japonica* (e, NZOI Stn V372, USNM 94036; f, NZOI Stn C690, USNM 94030; g-h, NZOI G230, USNM 94033): e, h, calicular views, $\times 4.1$, $\times 4.4$, respectively; f, aberrant calice with hypertrophied columella and pali, $\times 3.4$; g, side view, $\times 2.6$. *Caryophyllia lamellifera* (i, NZOI Stn I91, USNM 94358): i, side view showing transversely ridged theca, $\times 3.0$.

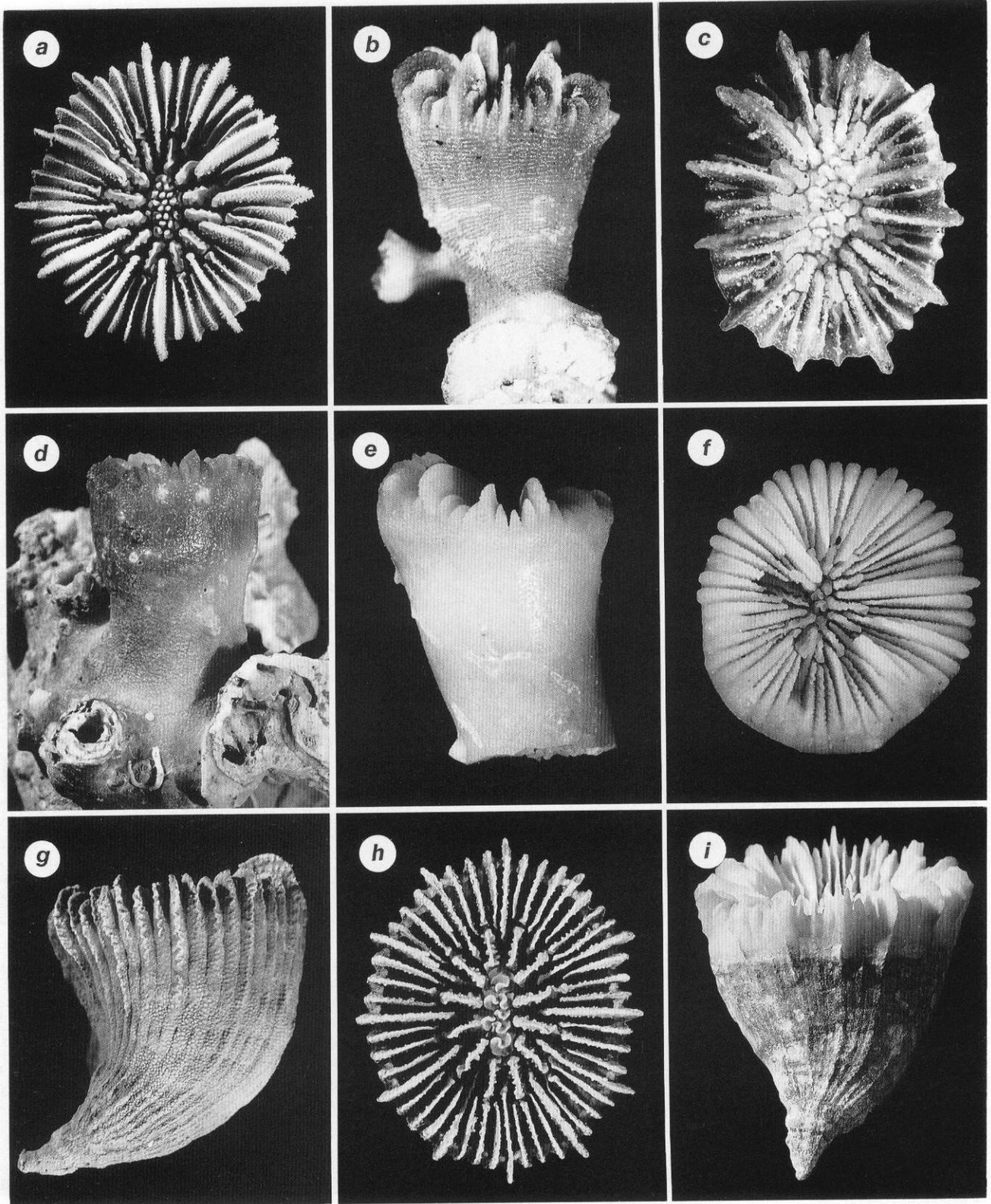


PLATE 10. *Caryophyllia lamellifera* (a, NZOI Stn I91, USNM 94358; b-c, holotype, *Challenger* Stn 170, BM(NH): a, calicular view of specimen coated with ammonium chloride, x 3.1; b-c, side and calicular views of holotype, x 4.8, x 8.2, respectively. *Caryophyllia elongata* (d-f, BS310, MoNZ CO85 and USNM 94054): d-e, side views, x 3.7, x 4.0, respectively; f, calicular view, x 4.7. *Caryophyllia scobinosa* (g-h, NZOI Stn G818, USNM 94045; i, *Franklin* Stn 5/89/25, AMS G15497): g-h, side and calicular views of same specimen, x 3.4, x 3.6, respectively; i, side view, x 2.3.

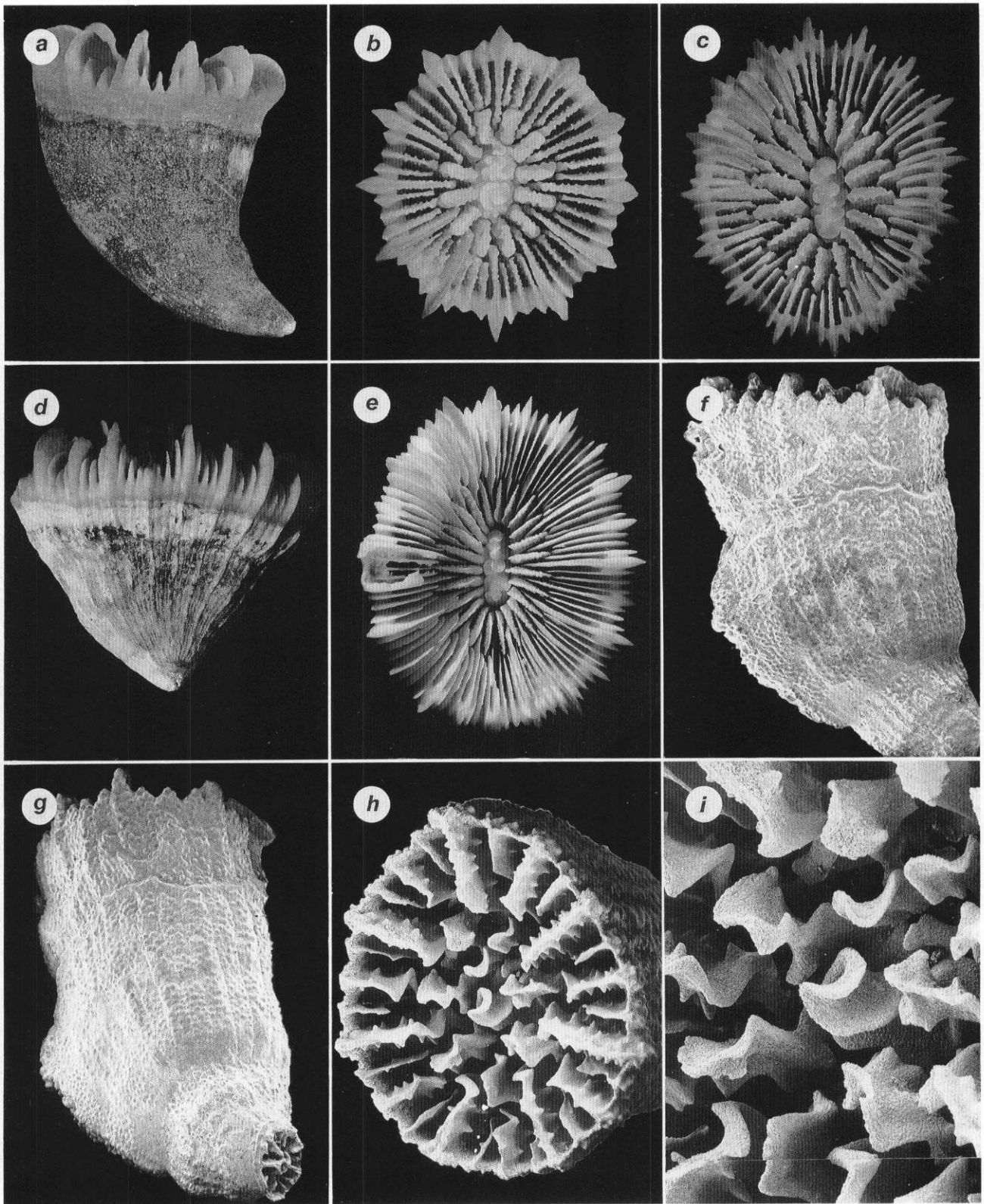


PLATE 11. *Caryophyllia scobinosa* (a-b, syntype, Siboga Stn 45, ZMA 574; c, Franklin Stn 5/89/25, AMS G15497): a-b, side and calicular views of same specimen, $\times 2.5$, $\times 3.1$, respectively; c, calicular view, $\times 2.8$. *Caryophyllia ambrosia* (d-e, BS844, USNM 94041): d-e, side and calicular views of same specimen, $\times 1.0$, $\times 1.1$, respectively. *Caryophyllia compressa* (f-i, BS441, MoNZ): f-g, side views showing thecal crest on convex edge, $\times 10$; h-i, calice of specimen with 7 pali, $\times 20$, $\times 44$, respectively.

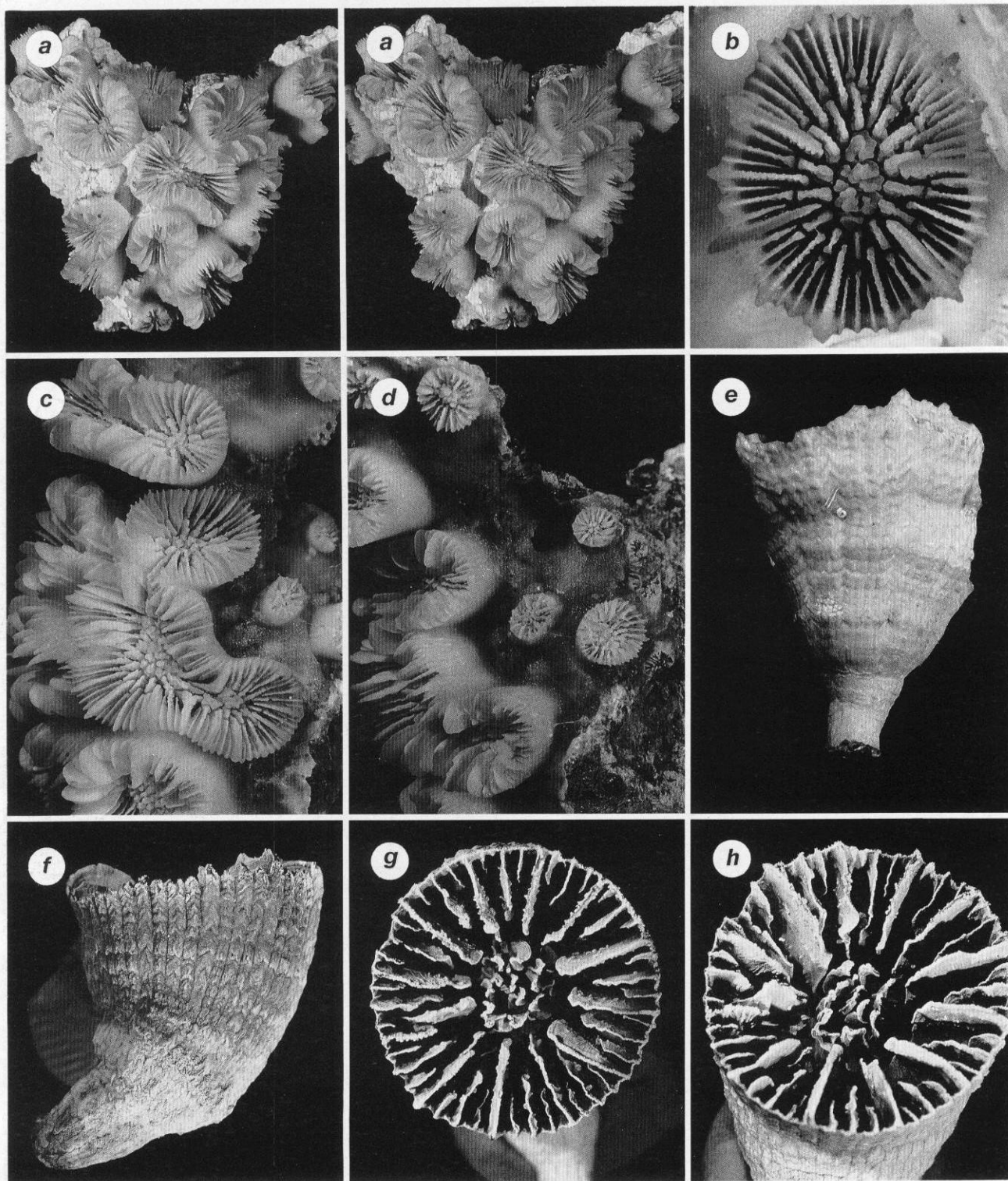


PLATE 12. *Coenocyathus brooki* (a, c-d, holotype; b, L1413, AIM AK76441, paratype): a, stereo view of holotype colony, x 1.2; b, calice, x 5.6; c, intratentacular budding, x 2.3; d, extratentacular budding from edge zone, x 2.5. *Crispatotrochus curvatus* (e, *Terra Nova* Stn 96, BM(NH) 1929.10.22.15; f-h, holotype): e, side view, x 2.7; f-h, side, calicular, and oblique calicular views of holotype, x 2.9, x 3.4, x 3.5, respectively.

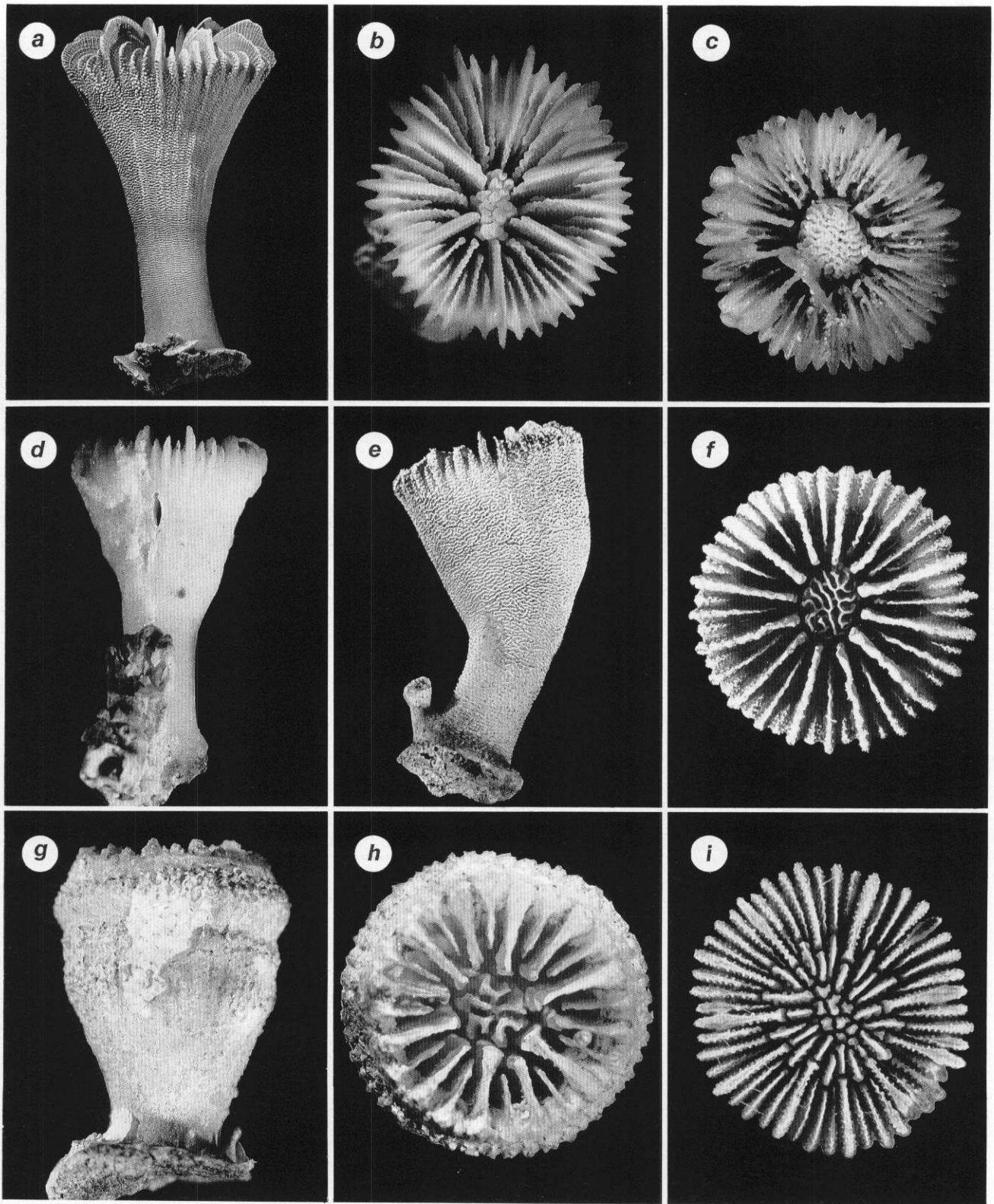


PLATE 13. *Crispatotrochus rugosus* (a-b, holotype): a-b, side and calicular views, x 2.4, x 3.4, respectively. *Labyrinthocyathus limatulus* (c-d, Franklin Stn 5/89/40, USNM 94128; e-f, NZOI Stn I94, USNM 94127): c-d, calicular and side views of specimen with an acrothoracid gall, x 4.1, x 2.8, respectively; e-f, side and calicular views of another specimen, x 3.7, x 5.6, respectively. *Labyrinthocyathus* sp. (g-h, NZOI Stn G941, USNM 94129): g-h, side and calicular views of same specimen, x 6.0, x 9.2, respectively. *Trochocyathus rhombocolumna* (i, holotype of *Paracyathus tenuicalyx*, USNM 20755): i, calice, x 6.2.

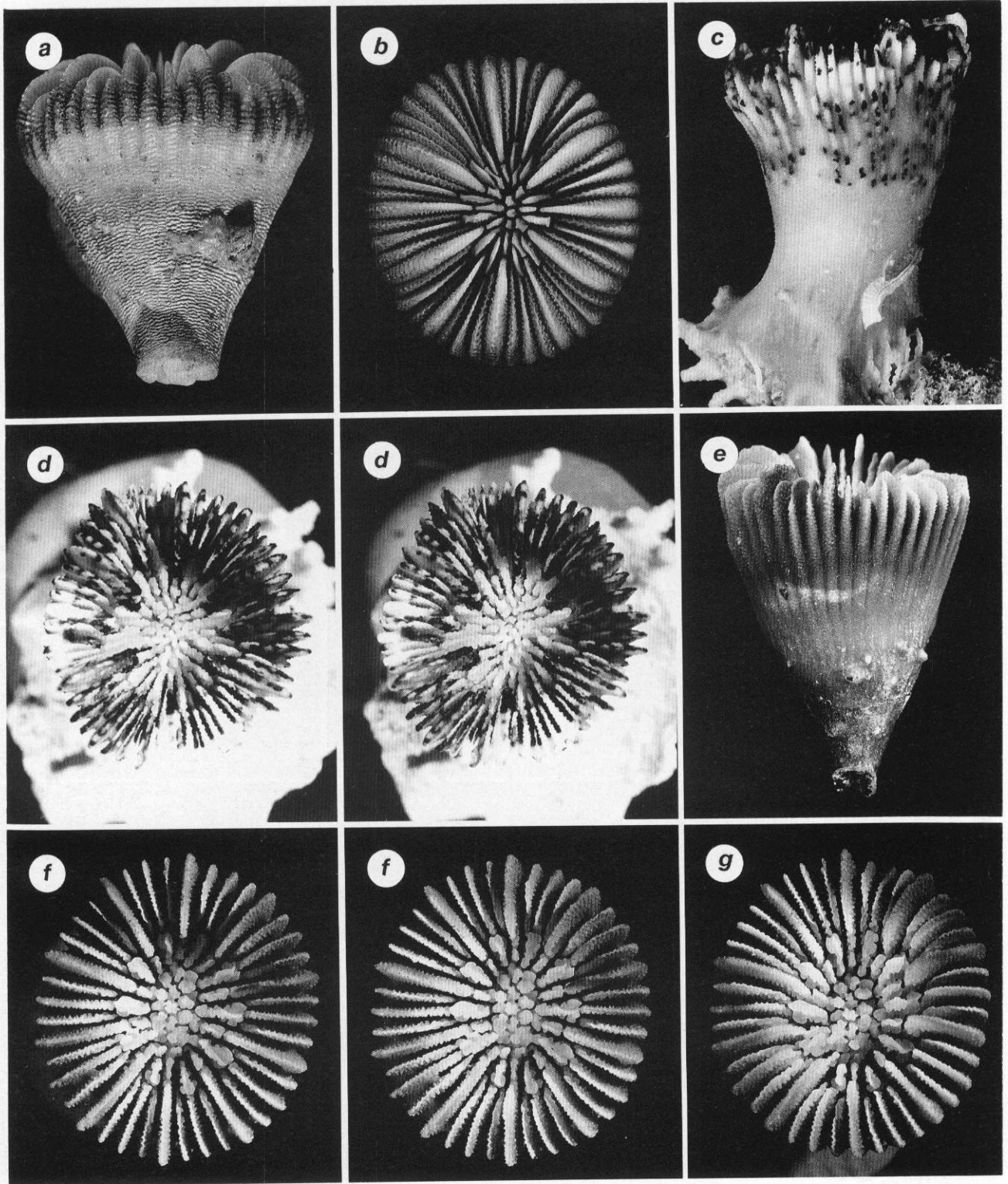


PLATE 14. *Trochocyathus rhombocolumnna* (a-b, NZOI Stn S572, USNM 94100): a-b, side and calicular views of same specimen, both $\times 2.7$. *Trochocyathus maculatus* (c-d, holotype): c-d, side and stereo calicular views of holotype, $\times 3.6$, $\times 4.2$, respectively. *Trochocyathus gordonii* (e-g, holotype): e, side view, $\times 3.8$; f-g, stereo calicular and oblique calicular views, both $\times 4.2$.

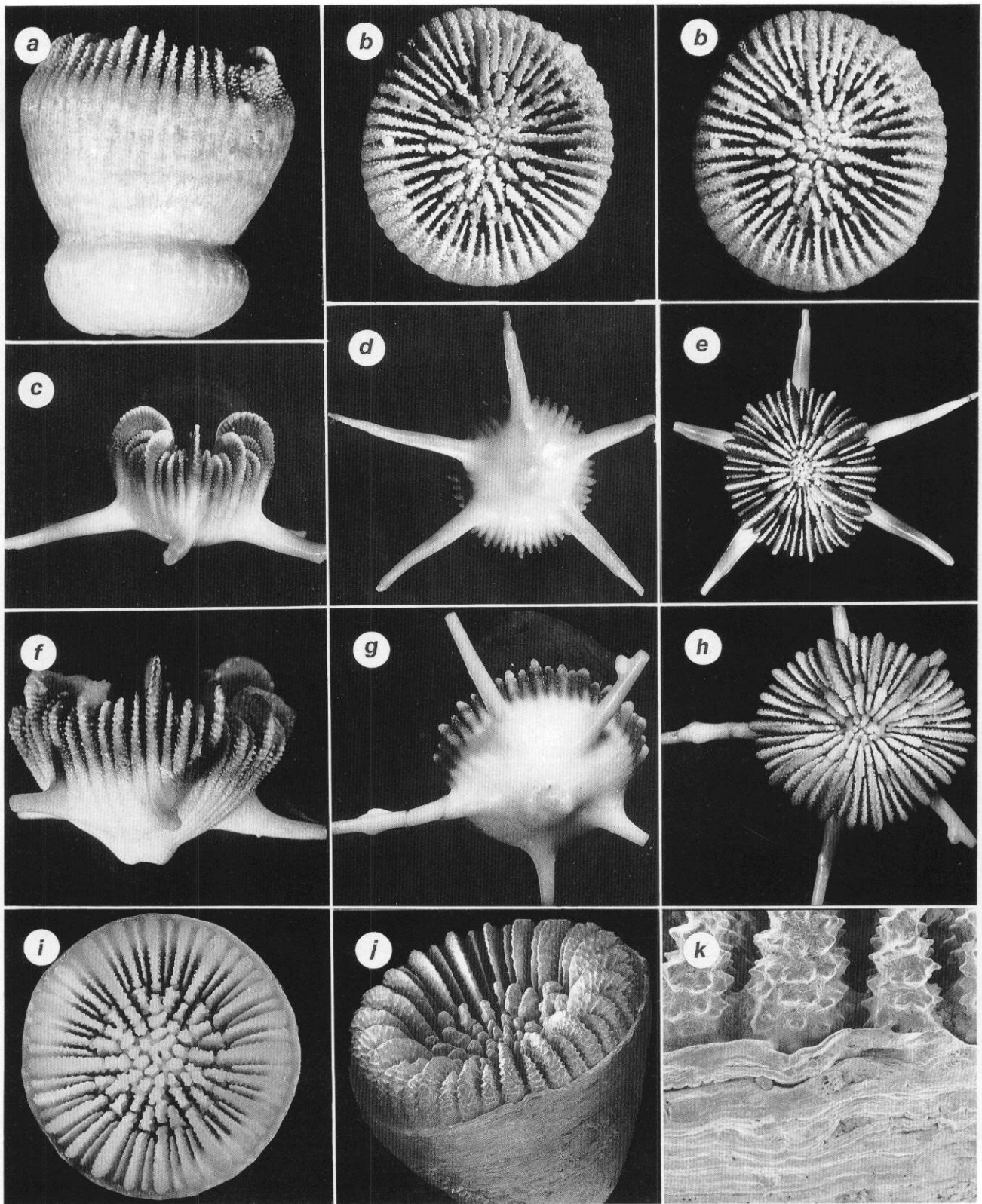


PLATE 15. *Trochocyathus cepulla* (a-b, holotype): a-b, side and stereo calicular views of holotype, x 4.1, x 4.6, respectively. *Trochocyathus hastatus* (c-e, NZOI Stn T225, USNM 94113; f-h, syntypes, AMS G14462-3): c-e, edge, basal, and calicular views of same specimen, all x 2.0; f-h, edge, basal, and calicular views of a syntype, x 3.2, x 2.5, x 2.5, respectively. *Tethocyathus cylindraceus* (i, Poor Knights Islands, NZGS; j-k, L3071, AIM AK78395): i, calicular view, x 6.6; j, oblique calicular view, x 8.3; k, epitheca near calicular edge, x 31.

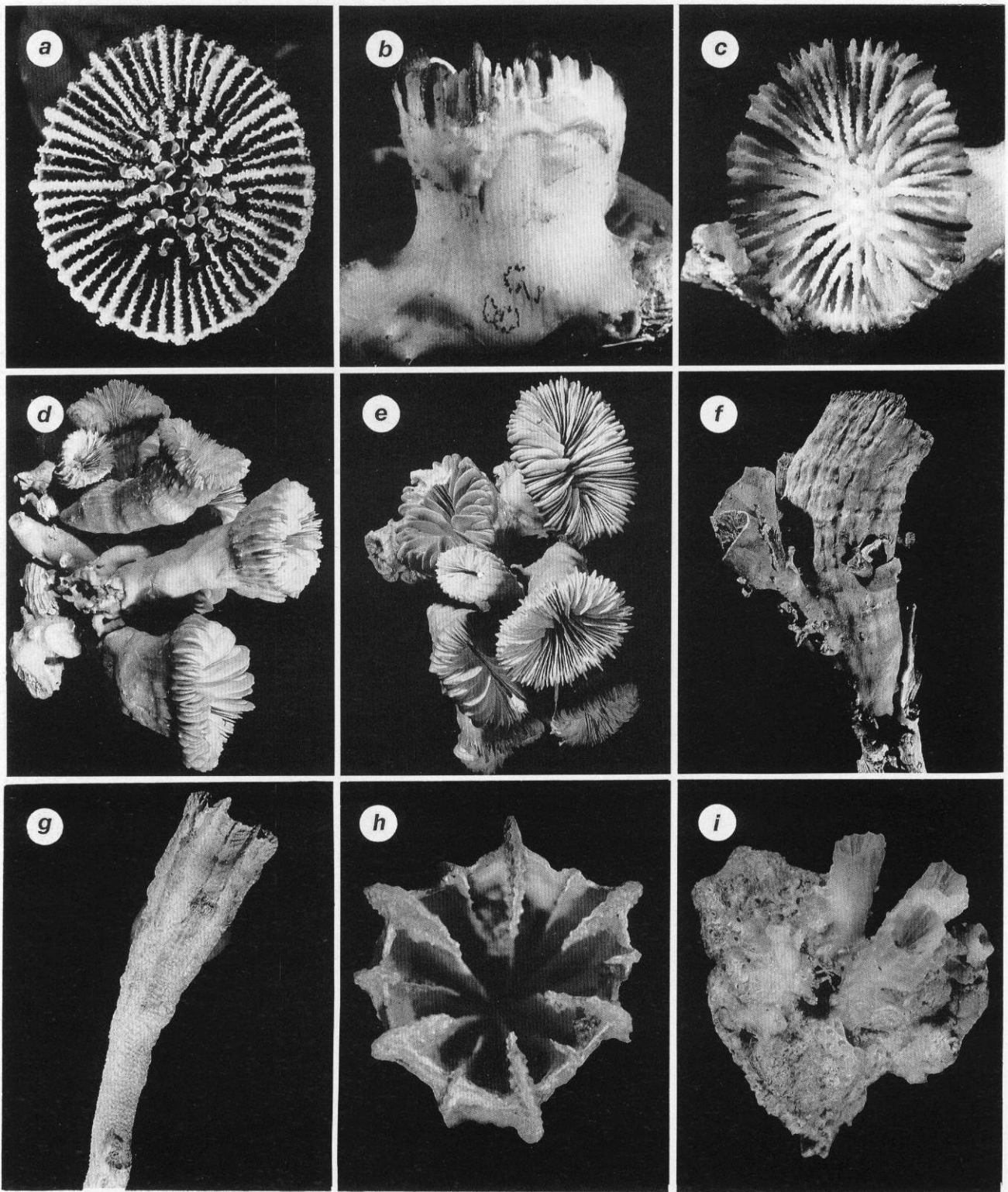


PLATE 21. *Dasmosmilia lymani* (a, NZOI Stn F896, USNM 94139): a, calicular view, x 3.2. "*Caryophyllia*" (= *Rhizosmilia*) *maculata* sensu Moseley (1881) (b-c, Challenger Stn 170, BM(NH) (unregistered)): b-c, side and calicular views of same specimen, x 3.1, x 3.9, respectively. *Desmophyllum dianthus* (d-e, NZOI D175, USNM 47413; f, NZOI Stn G200, USNM 94064): d-e, a pseudocolonial cluster of coralla, x 0.51; f, very large corallum bearing numerous, widely spaced endothecal dissepiments internally, x 0.35. *Thalamophyllia tenuescens* (g-h, BS571, MoNZ CO230; i, NZOI K838, USNM 94141): g-h, side and calicular views of a corallite, x 4, x 13, respectively; i, a small cluster of corallites, x 3.1.

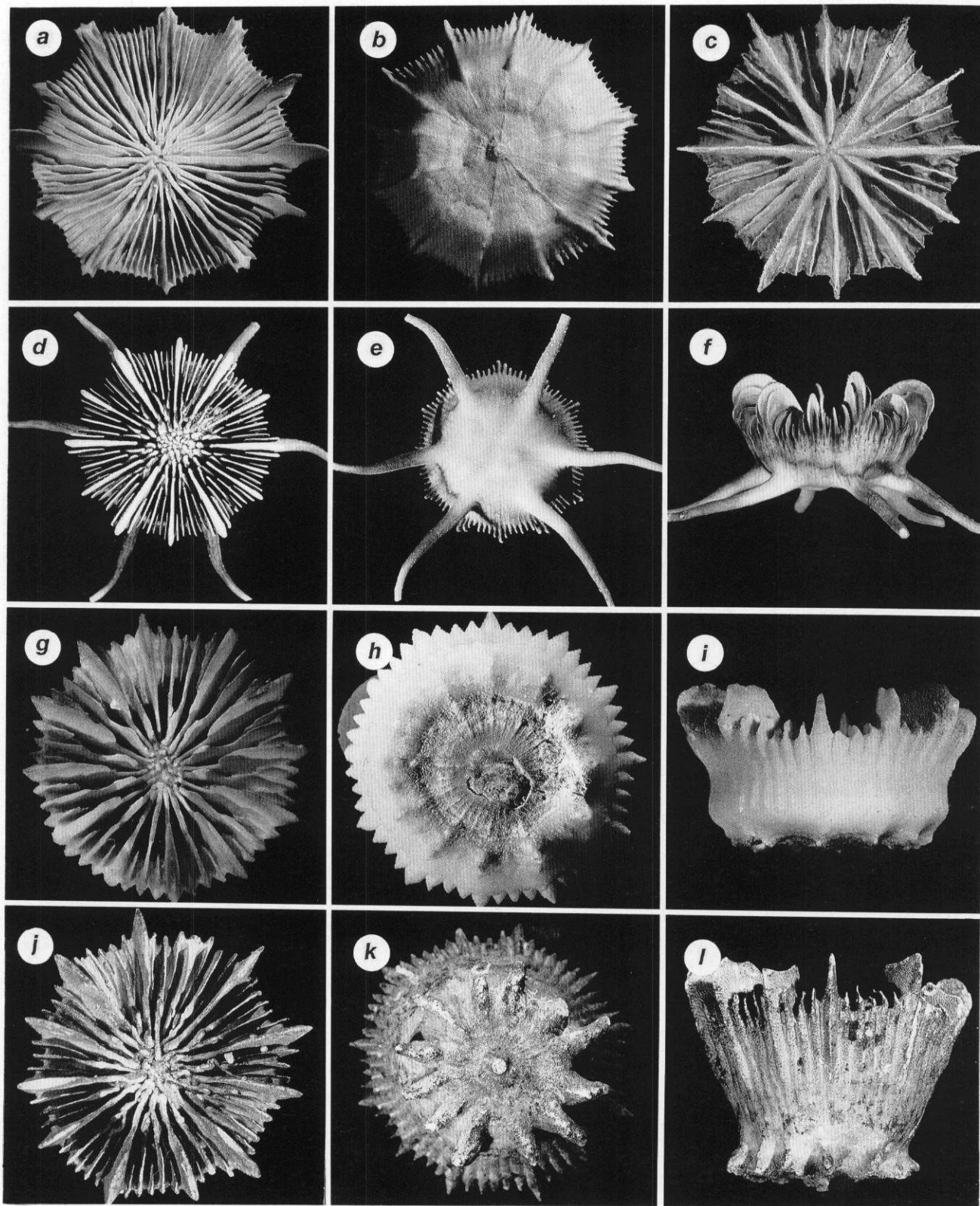


PLATE 17. *Stephanocyathus platypus* (a-b, *Eltanin* Stn 1718, USNM 47522; c, NZOI Stn P120, USNM 94165): a-b, calicular and basal views of same specimen, both $\times 0.8$; c, juvenile corallum still attached to substratum, $\times 2.1$. *Stephanocyathus spiniger* (d-f, NZOI Stn P14, USNM 49231): d-f, calicular, basal, and edge views of same corallum, $\times 1.3$, $\times 1.0$, $\times 1.2$, respectively. *Stephanocyathus weberianus* (g-i, NZOI Q68, USNM 94149): g-i, calicular, basal, and edge views of same corallum, all $\times 2.3$. *Stephanocyathus coronatus* (j-l, NZOI Stn P945, USNM 94147): j-l, calicular, basal, and edge views of same corallum, all $\times 1.2$.

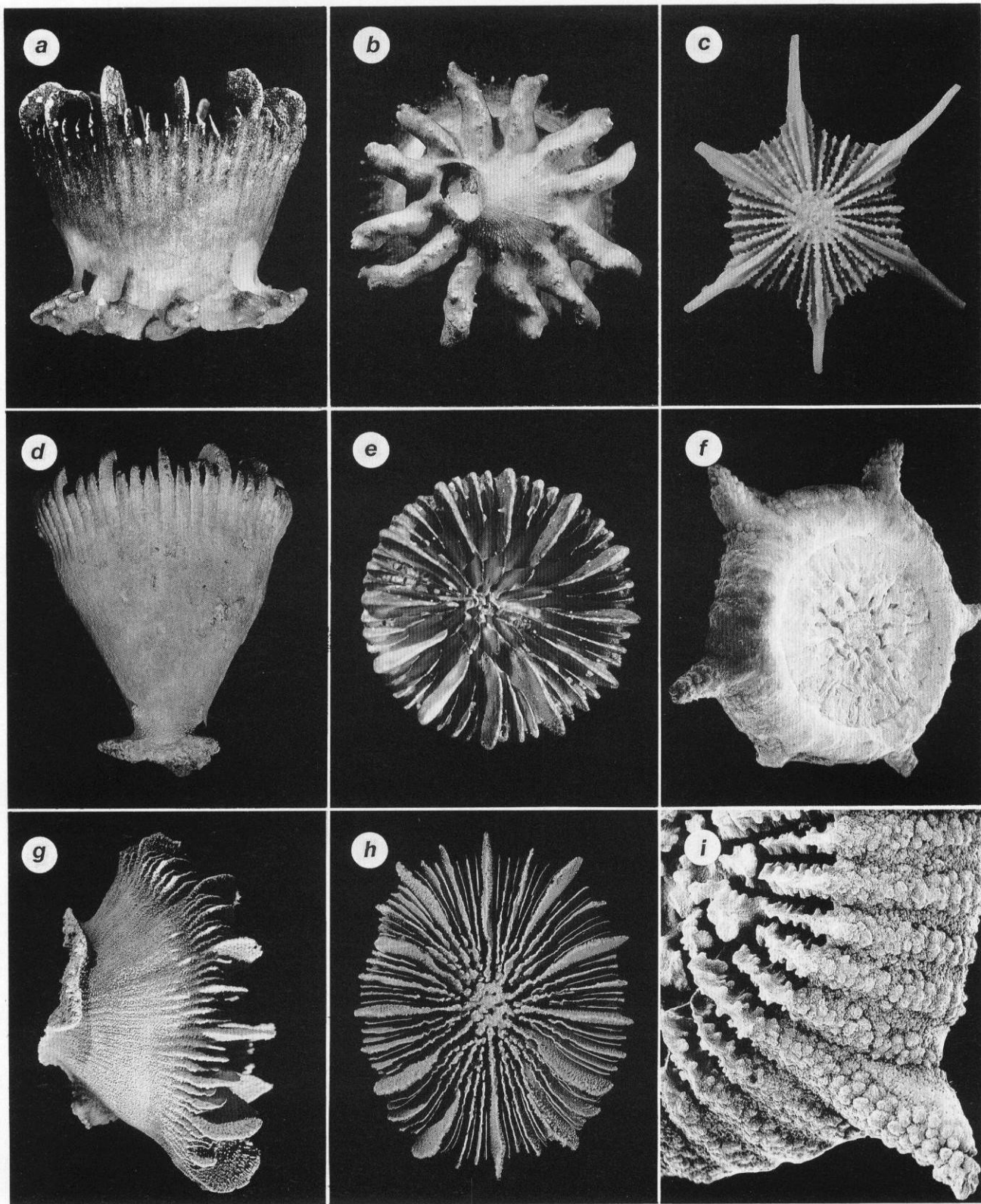


PLATE 18. *Stephanocyathus coronatus* (a-b, NZOI Stn P943, USNM 94146): a-b, side and basal views of specimen with prominent costal tubercles, both $\times 1.5$. *Stephanocyathus spiniger* (c, NZOI Stn I94, USNM 94156): c, juvenile specimen, $\times 3.4$. *Vaughanella oreophila* (d, NZOI Stn P8, USNM 94166; e, NZOI Stn P947, USNM 94168): d-e, calicular views of different specimens, $\times 2.0$, $\times 2.9$, respectively. *Bourneotrochus stellulatus* (f, i, Franklin Stn 5/89/40, AMS G15557): f, basal view of anthocyathus showing detachment scar, $\times 14$; i, enlargement of a costal spine, $\times 33$. *Vaughanella multipalifera* (g-h, NZOI Stn F874, paratype, USNM 94152): g-h, side and calicular views of a paratype, both $\times 2.0$.

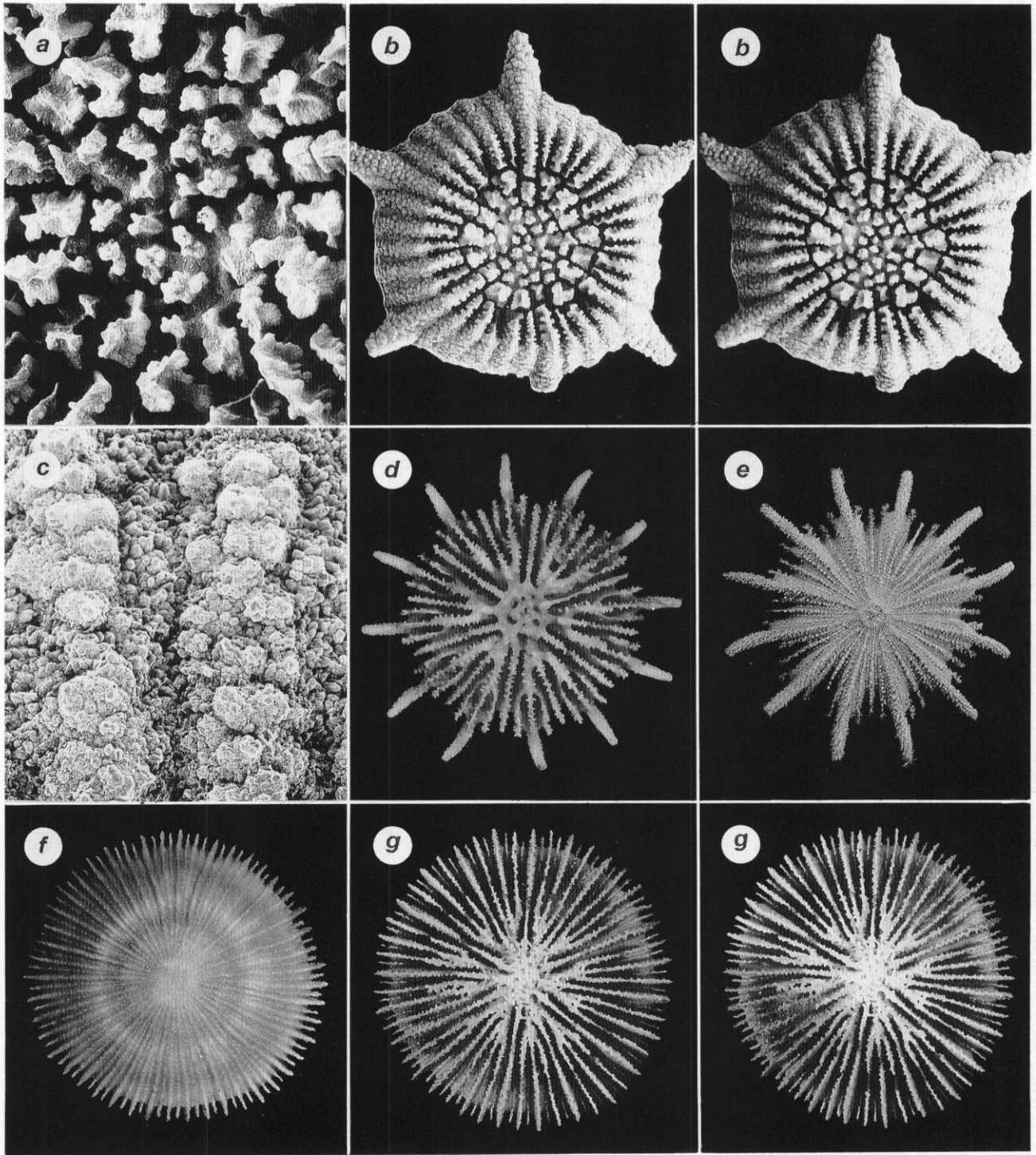


PLATE 19. *Bourneotrochus stellulatus* (a-c, Franklin Stn 5/89/40), AMS G15557: a, columella and pali, x 39; b, stereo view of calice, x 13.2; c, enlargement of two costae and an intercostal furrow, x 101. *Deltocyathus ornatus* (d-e, NZOI Stn P27, USNM 94169): d-e, calicular and basal views of same specimen, both x 4.1. *Deltocyathus formosus* (f-g, holotype): f-g, basal and stereo calicular views of holotype, both x 2.9.

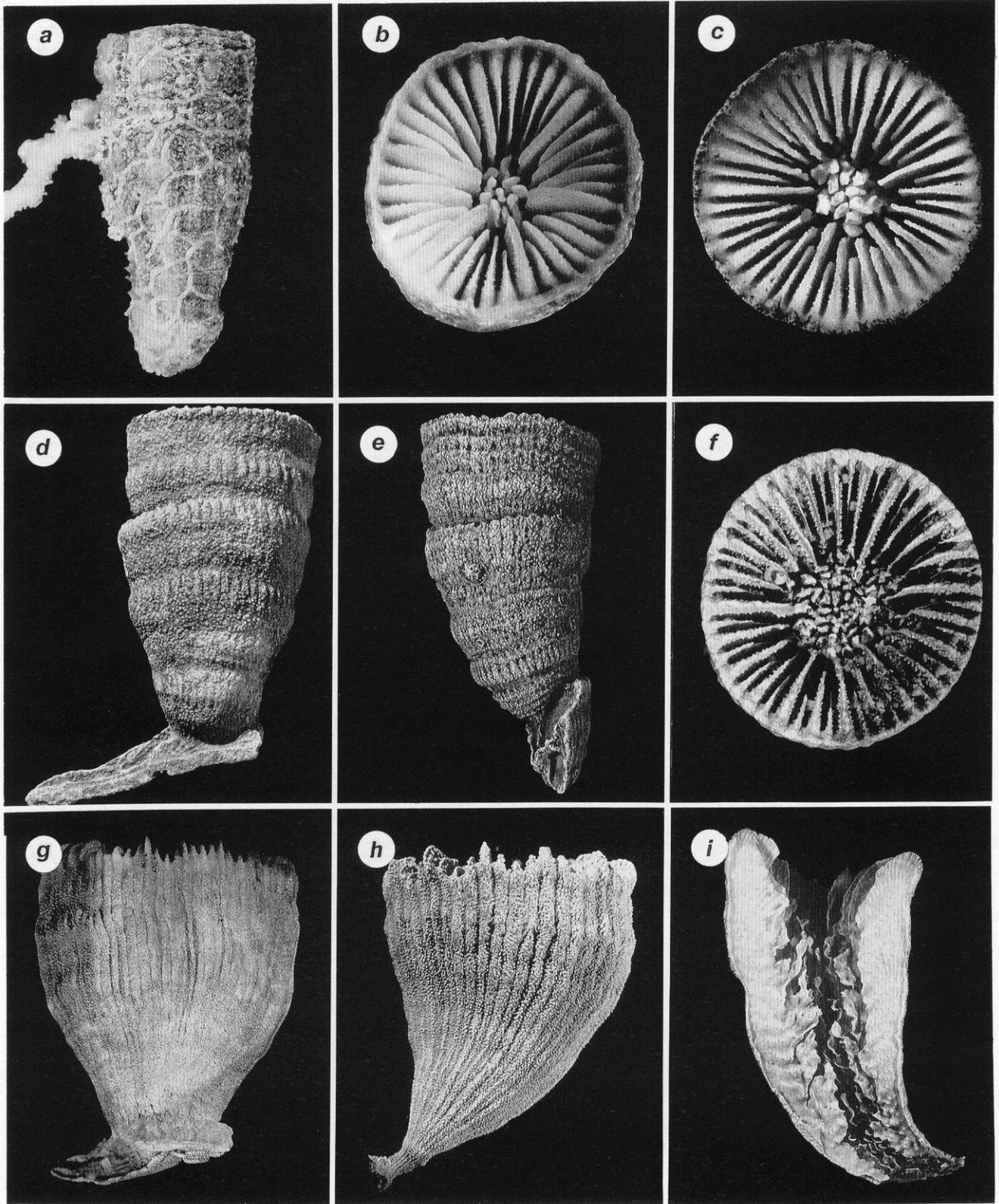


PLATE 20. *Conotrochus brunneus* (a-b, NZOI Stn U591, USNM 94116): a-b, side and calicular views of same specimen, x 3.5, x 6.4, respectively. *Aulocyathus recidivus* (c, e, NZOI Stn C734, USNM 47524; d, f, NZOI Stn U584, USNM 94121): c, f, calicular views, x 4.5, x 3.8, respectively; d-e, side views, x 2.9, x 2.8, respectively. *Dasmosmilia lymani* (g, NZOI Stn F909, USNM 94137; h, NZOI Stn F896, USNM 94139; i, BS831, MoNZ): g, side view of a typical specimen regenerated from a fragment, x 2.5; h, side view of specimen growing from planular settlement, x 1.7; i, longitudinal fracture showing multiple paliform lobes, x 2.4.

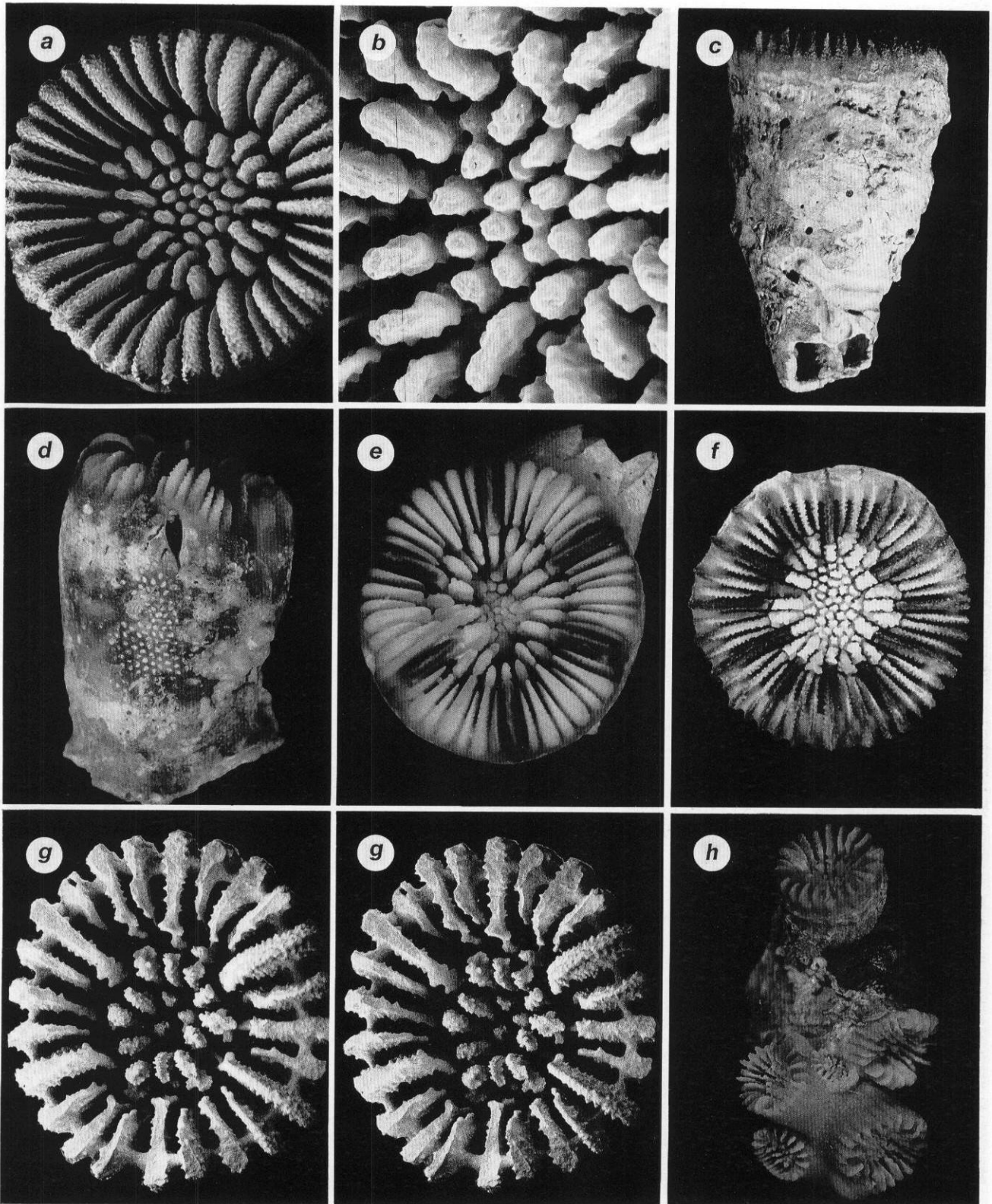


PLATE 16. *Tethocyathus cylindraceus* (a-b, L3071, AIM AK78395): a-b, calicular elements, x 8, x 18, respectively. *Tethocyathus virgatus* (c, f, holotype; d-e, NZOI Stn S572, USNM 94093): c, f, side and calicular views of holotype, x 3.4, x 4.3, respectively; d-e, side and calicular views of corallum with acrothoracic gall, x 2.7, x 3.9, respectively. *Polycyathus norfolkensis* (g-h, L4622, AIM AK72401, types): g, stereo view of a paratype calice, x 15; h, holotype colony, x 4.5.

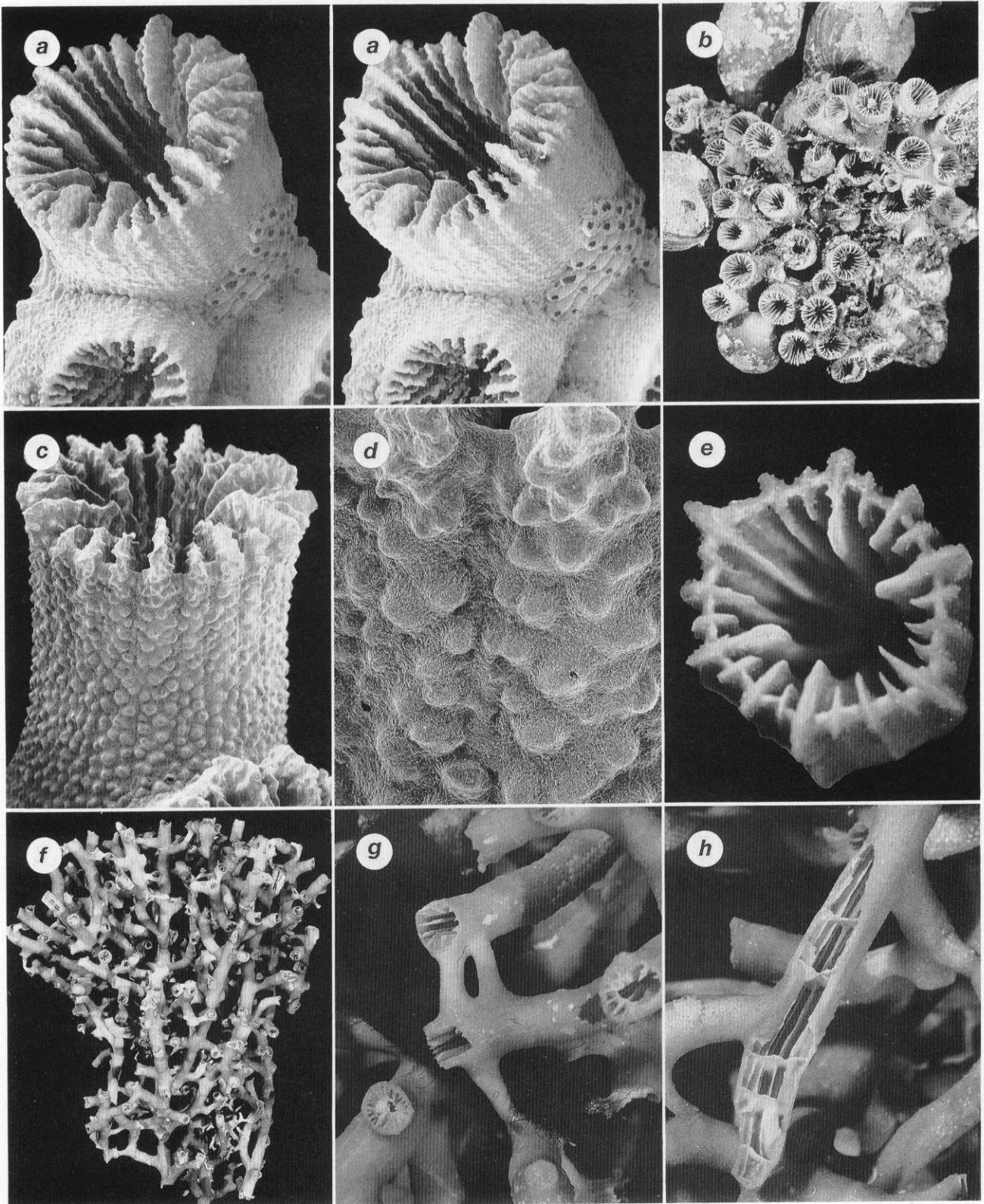


PLATE 22. *Hoplangia durotrix* (a, c-d, off Mokohinau, AU 6097; b, L2925, AIM AK78232): a, stereo view of a corallite, x 12.6; b, a small colony, x 1.4; c, side view of a corallite, x 22; d, enlargement of costal granulation, x 92. *Goniocorella dumosa* (e-h, NZOI Stn D175, USNM 47505): e, calice of a corallite, x 12.1; f, densely branched colony, x 0.6; g, corallites linked by coenosteal bridges, x 2.3; h, fractured branch revealing tabular endothelial dissepiments, x 3.1.

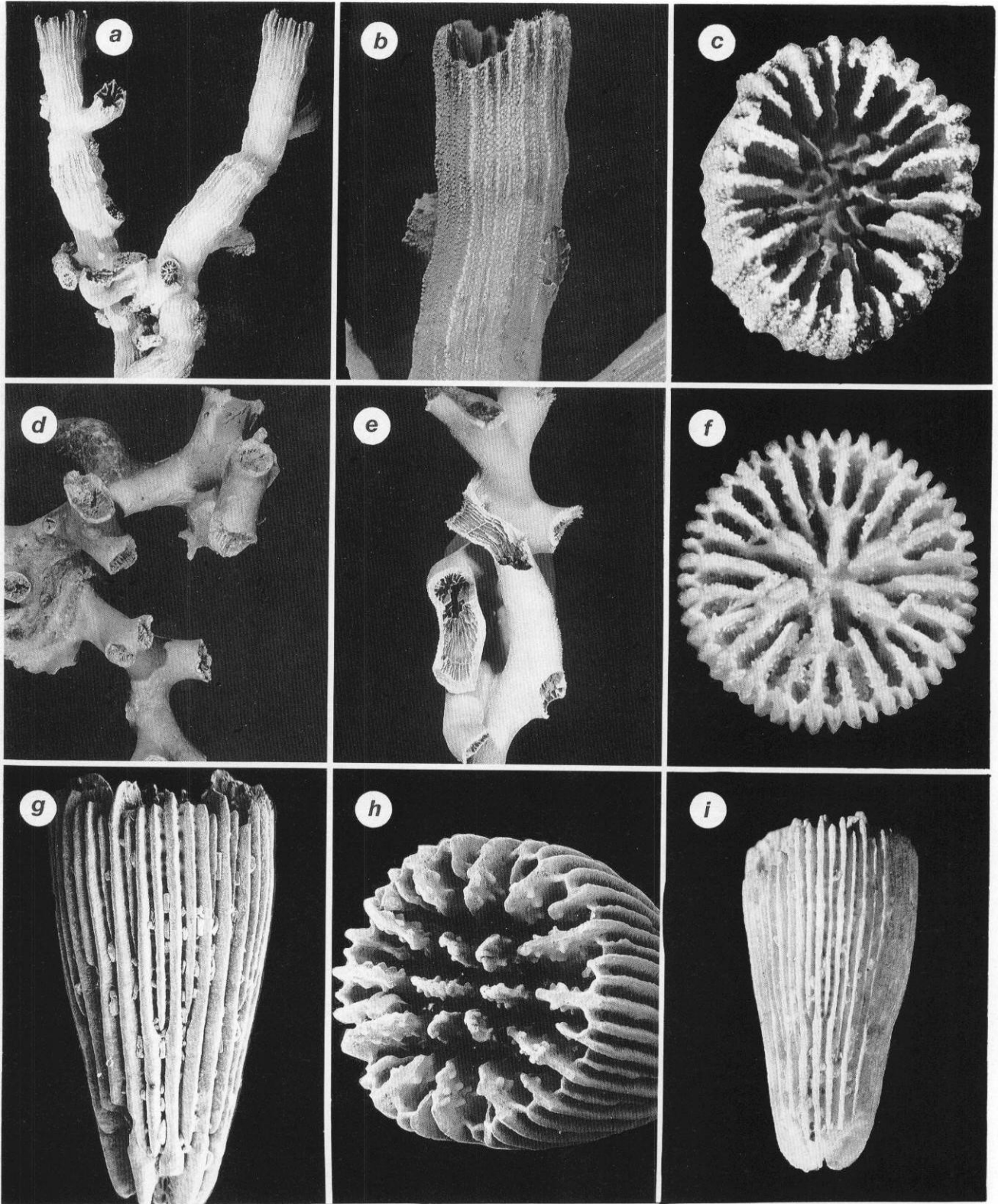


PLATE 23. *Anomocora* cf. *fecunda* (a-c, NZOI Stn K838, USNM 94140): a, colony, x 2.0; b, costal granulation, x 4.8; c, calice, x 11.2. *Solenosmilia variabilis* (d, NZOI Stn S46, USNM 94145; e, *Eltanin* Stn 1414, USNM 47420): d, a small colony showing intratentacular budding, x 1.1; e, fractured corallites revealing endothecal dissepiments, x 2.2. *Coenocyathus zelandiae* (f, i, syntype, BM(NH) 1890.2.27.2; g-h, King George Sound, western Australia, USNM 85713): f, h, calicular views, x 12.8, x 26, respectively; g, i, side views, x 17, x 8.7, respectively.

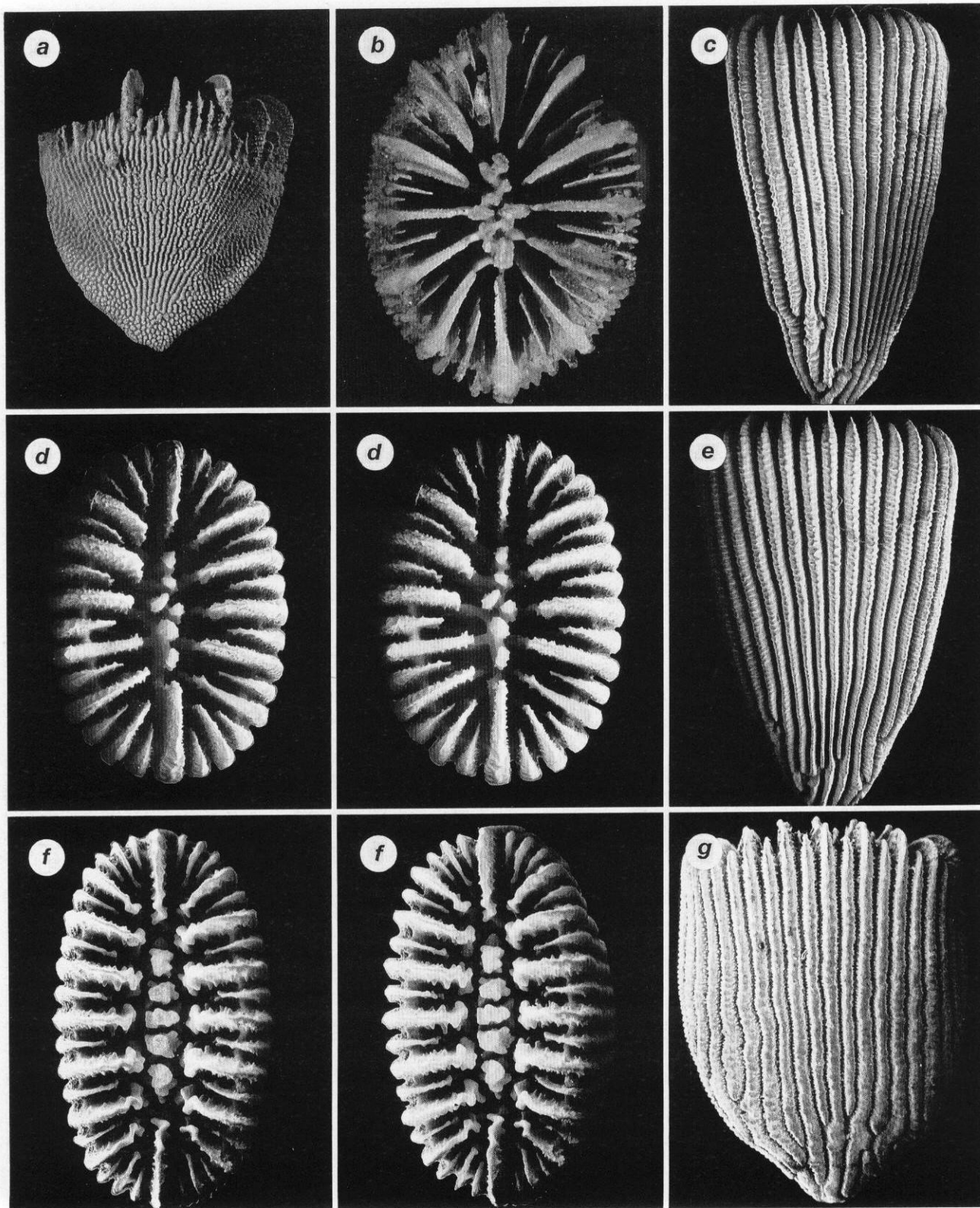


PLATE 24. *Almatrochus rubescens* (a-b, NZOI Stn P13, USNM 94175): a-b, side and calicular views of same specimen, x 3.5, x 5.2, respectively. *Sphenotrochus ralphae* (c-e, AIM AK76312): c-e, oblique edge, stereo calicular, and side views of same specimen, x 9.5, x 13.0, x 10.0, respectively. *Sphenotrochus squiresi* (f-g, BS642, MNZ CO274, paratype): f-g, stereo calicular and side views of same specimen, x 17.5, x 12.9, respectively.

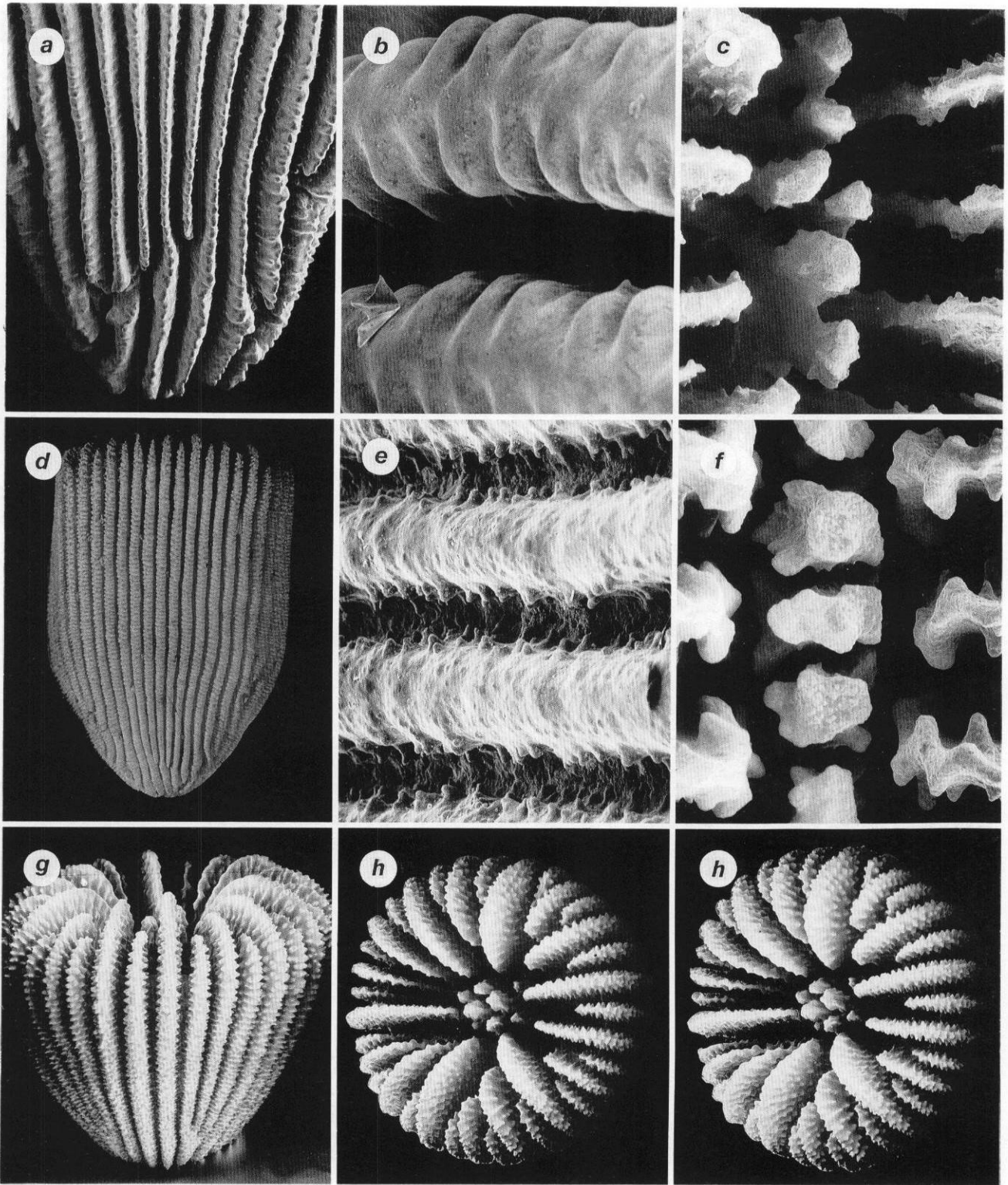


PLATE 25. *Sphenotrochus ralphae* (a-c, AIM AK76312): a, costae at base of corallum, x 26; b, enlargement of two costae near calicular edge, x 113; c, enlargement of columella, x 39. *Sphenotrochus squiresi* (d, holotype; e-f, BS642, MoNZ CO274, paratype): d, side view of holotype, x 6.8; e, enlargement of two costae, x 105; f, columella, x 60. *Kionotrochus suteri* (g-h, NZOI Stn F915, USNM 94200): g-h, side and oblique calicular stereo views, x 11.8, x 10.0, respectively.

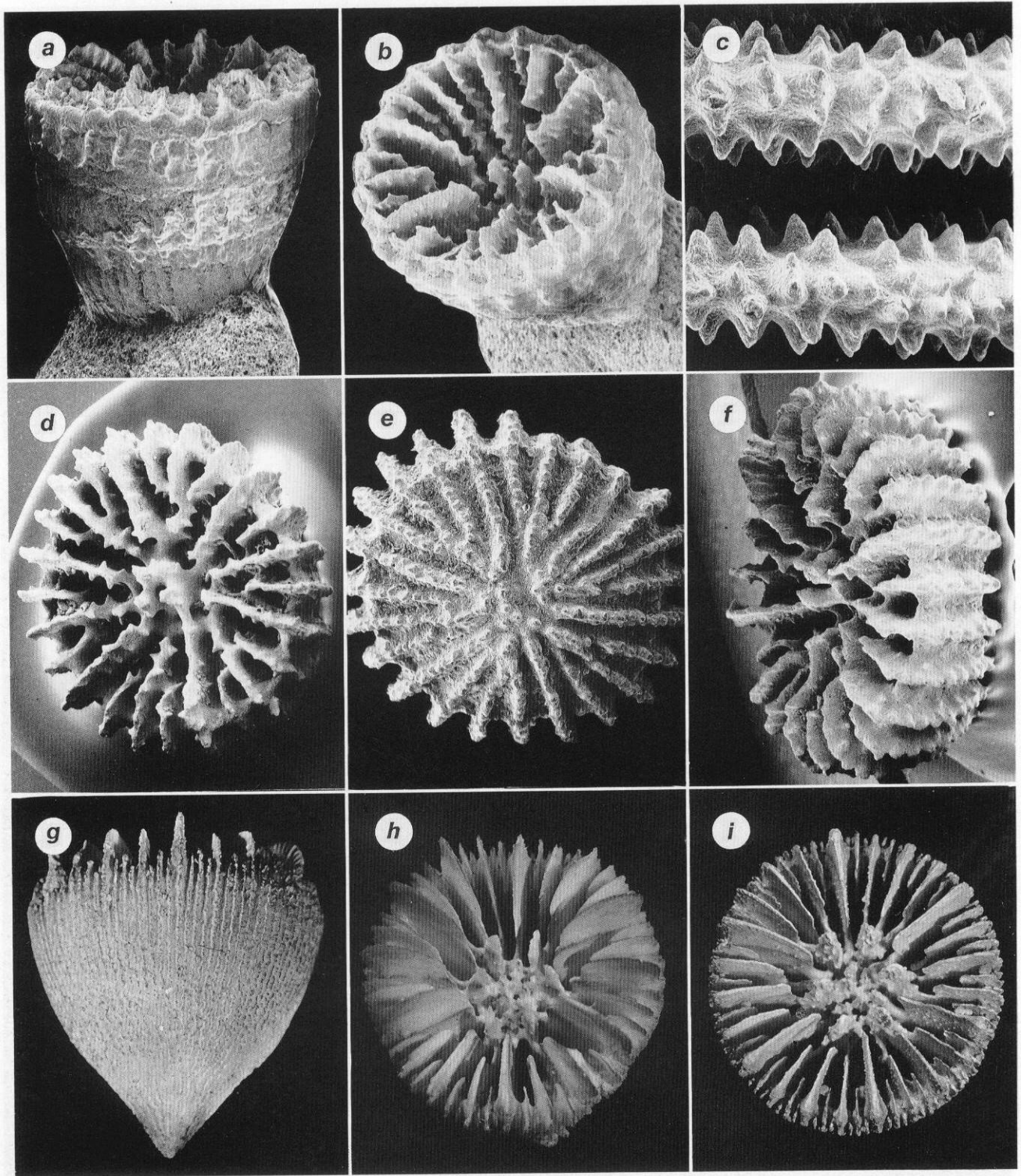


PLATE 26. *Kionotrochus suteri* (a-b, d, f, NZOI Stn C793, USNM 94195; c, NZOI Stn F915, USNM 94200; e, off Cuvier Island, USNM 78586): a-b, side and oblique calicular views of an anthocaulus, both $\times 23$; c, costal granulation of an anthocyathus, $\times 67.5$; d-f, calicular, basal, and side views of a recently budded anthocyathus, $\times 24$, $\times 20$, $\times 30$, respectively. *Cryptotrochus venustus* (g-i, NZOI Stn U584, USNM 94178): g, side view, $\times 3.5$; h-i, calicular views of two specimens, $\times 4.2$, $\times 3.9$, respectively.

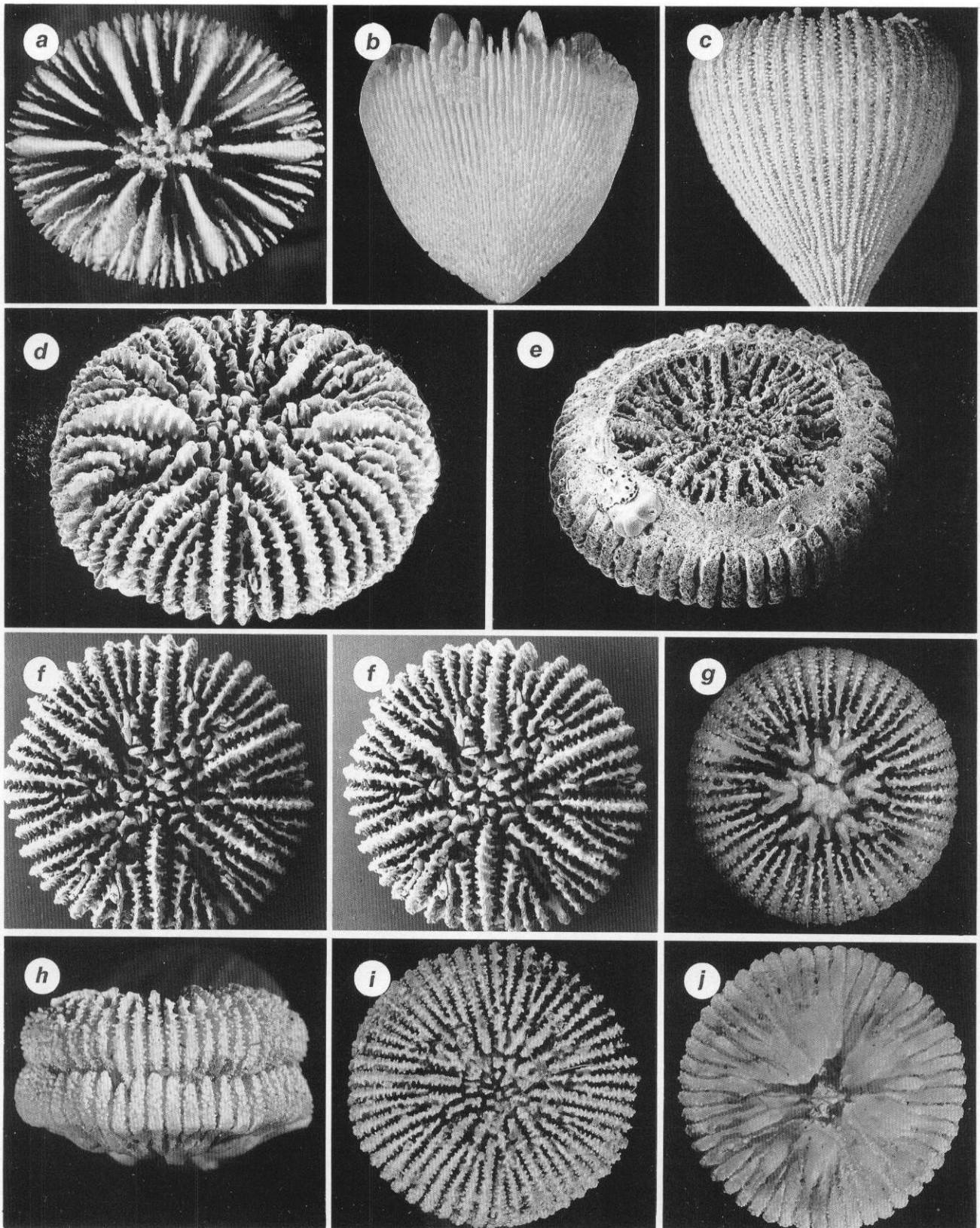


PLATE 27. *Cryptotrochus venustus* (a-b, holotype, *Siboga* Stn 256, ZMA 1184): a-b, calicular and side views of holotype, $\times 5.8$, $\times 4.9$, respectively. *Notocyathus conicus* (c, g, BS441, USNM 94177): c, g, side and calicular views of same specimen, $\times 7.0$. *Peponocyathus dawsoni* (d, f, MoNZ, BS634; e, NZOI Stn D173, USNM ; h-j, holotype): d, f, oblique calicular and stereo calicular views of an anthocyathus, $\times 20.5$, $\times 16.0$, respectively; e, an anthocaulus showing transverse division scar, $\times 12.7$; h-j, side, calicular, and basal views of two anthocyathi that have not yet separated, the lower anthocyathus also showing its detachment scar, all $\times 7.2$.

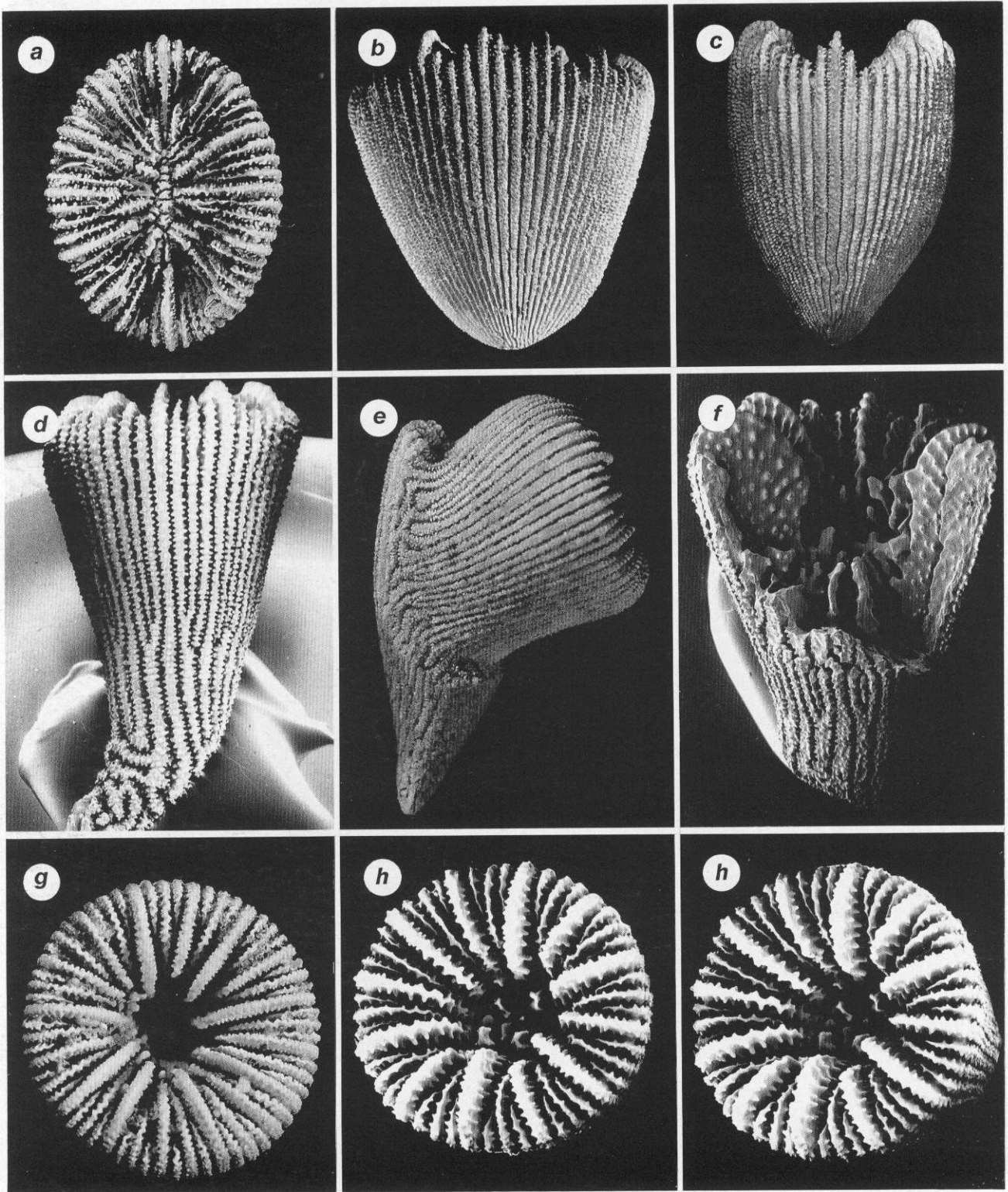


PLATE 28. *Tropidocyathus pileus* (a-c, NZOI Stn P14, USNM 94176): a-c, calicular, side, and edge views of same corallum, all $\times 3.3$. *Thrypticotrochus multilobatus* (d, h, BS438, USNM 94179; e, g, BS833, MoNZ; f, NZOI Stn K818): d-e, side views showing regeneration from fragments, $\times 13.1$, $\times 6.6$, respectively; f, fractured corallum revealing multiple paliform lobes, $\times 13.2$; g-h, calicular views (h is a stereo pair), $\times 8.1$, $\times 14.8$, respectively.

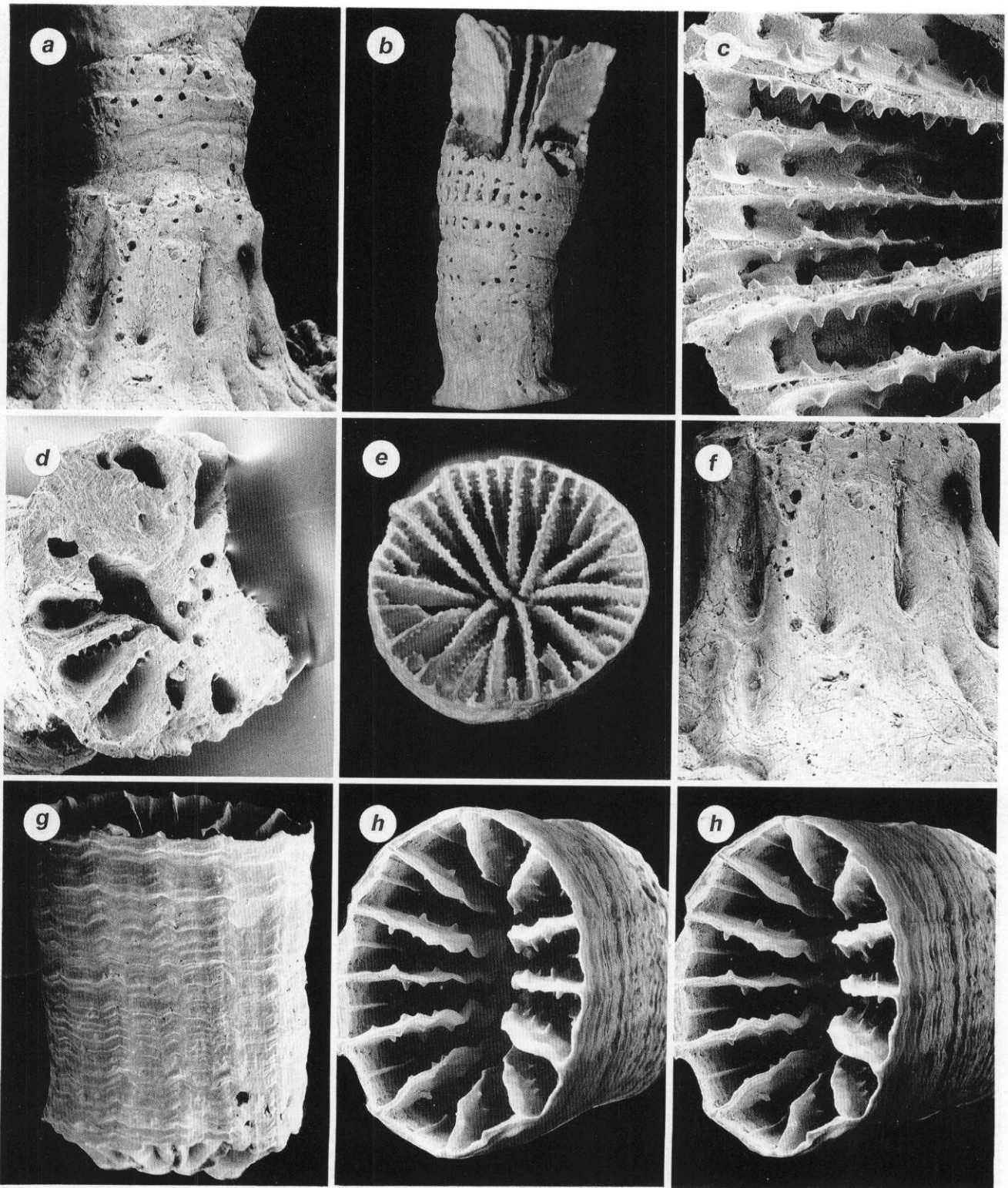


PLATE 29. *Pedicellocyathus keyesi* (a-f, holotype and paratypes from BS833): a, f, side views of pedicel structure, x 11.8, x 16.8, respectively; b, damaged corallum illustrating pedicel and thecal pores, x 5.3; c, view of thecal pores from within calice, x 32; d, cross section through pedicel revealing hollow rootlet structures, x 32; e, calice of holotype, x 6.7. *Truncatoguynia irregularis* (g-h, MoNZ, BS434 (CO236)): g-h, side and stereo calicular views of same specimen, x 13.7, x 15.8, respectively.

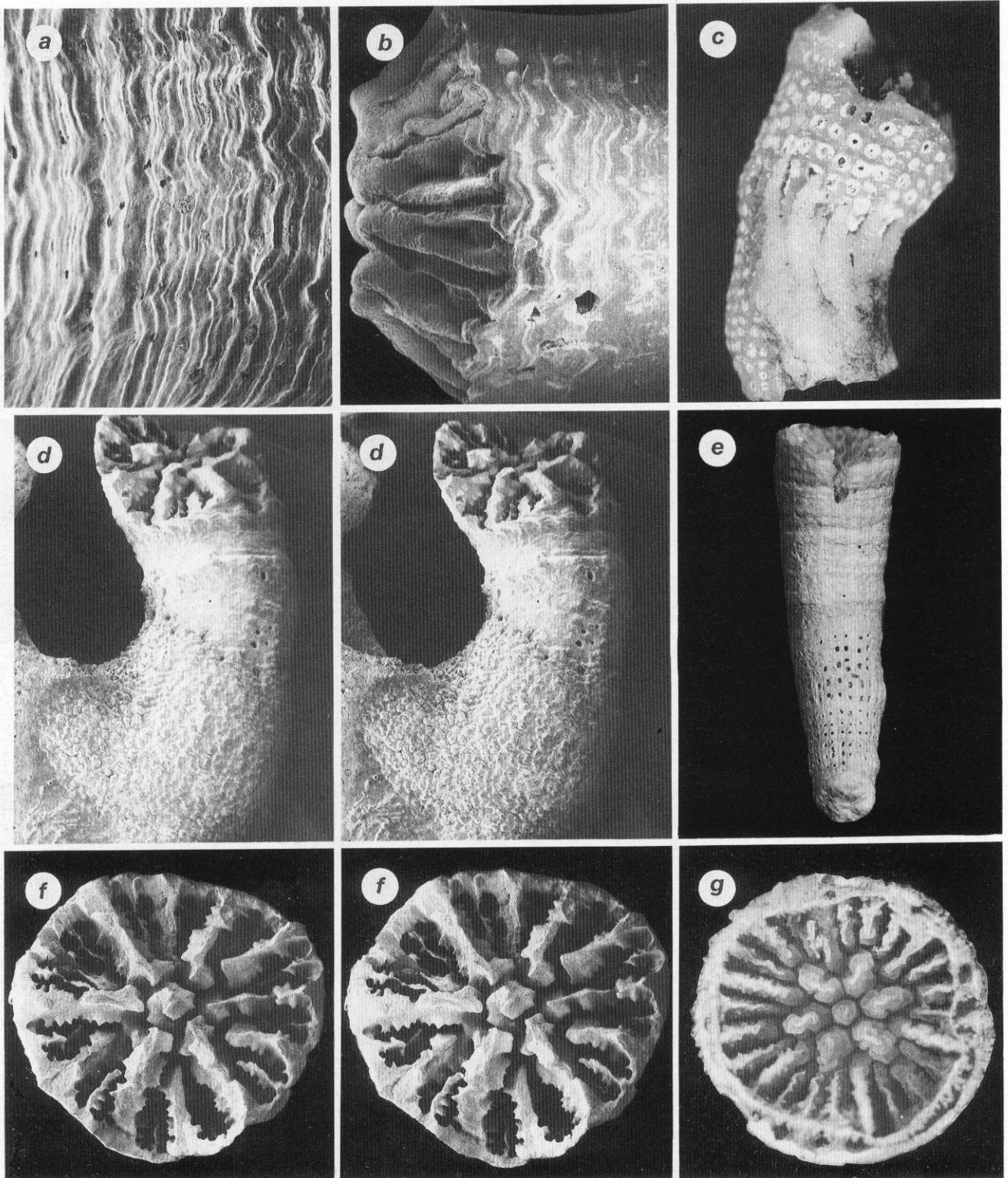


PLATE 30. *Truncatogyunia irregularis* (a-b, BS434, MoNZ CO236): a, fine horizontal thecal striations, x 34; b, basal scar, x 21.5. *Stenocyathus vermiformis* (c, *Eltanin* Stn 1411, USNM 47448; d, f, NZOI Stn S572, USNM 94368; e, NZOI Stn B319, USNM 47447; g, NZOI Stn D160, USNM 47451): c, corallum base illustrating solid, exothecal root-like deposits, x 9.3; d, stereo view of granular stereome at corallum base, x 13.5; e, worn corallum illustrating coenosteal pores, x 4.8; f, g, stereo and normal calicular views, x 26, x 11, respectively.

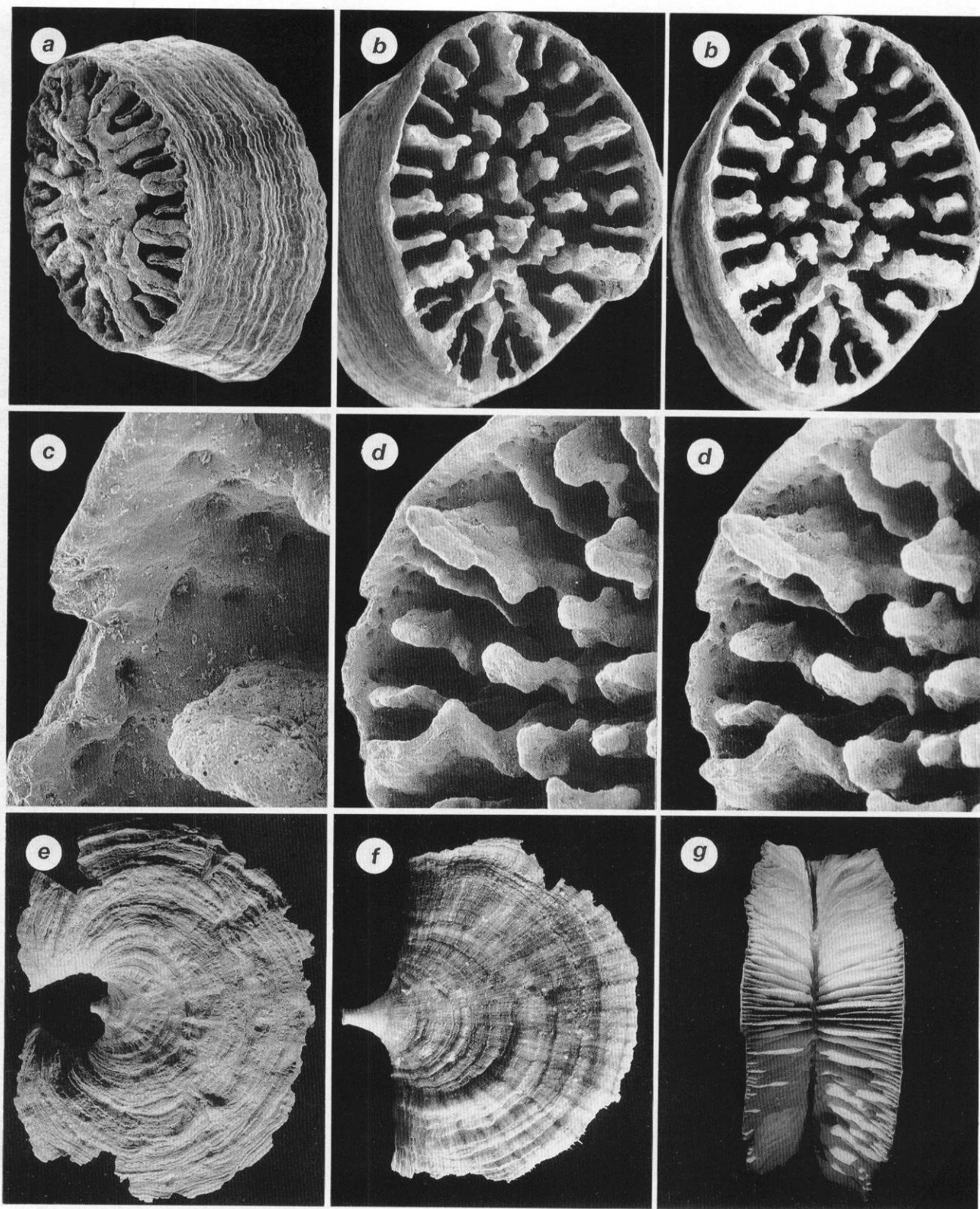


PLATE 31. *Temnotrochus kermadecensis* (a-d, BS441, USNM 94287, paratypes): a, basal scar of an anthocyathus, x 36; b, stereo view of calice, x 36; c, view of thecal pore indentations from within calice, x 270; d, stereo view of portion of calice, x 70. *Flabellum knoxi* (e, NZOI Stn G293, USNM 94331; f-g, NZOI Stn G697, USNM 94332): e, a highly recurved corallum, x 0.66; f-g, side and calicular views of same specimen, both x 0.91.

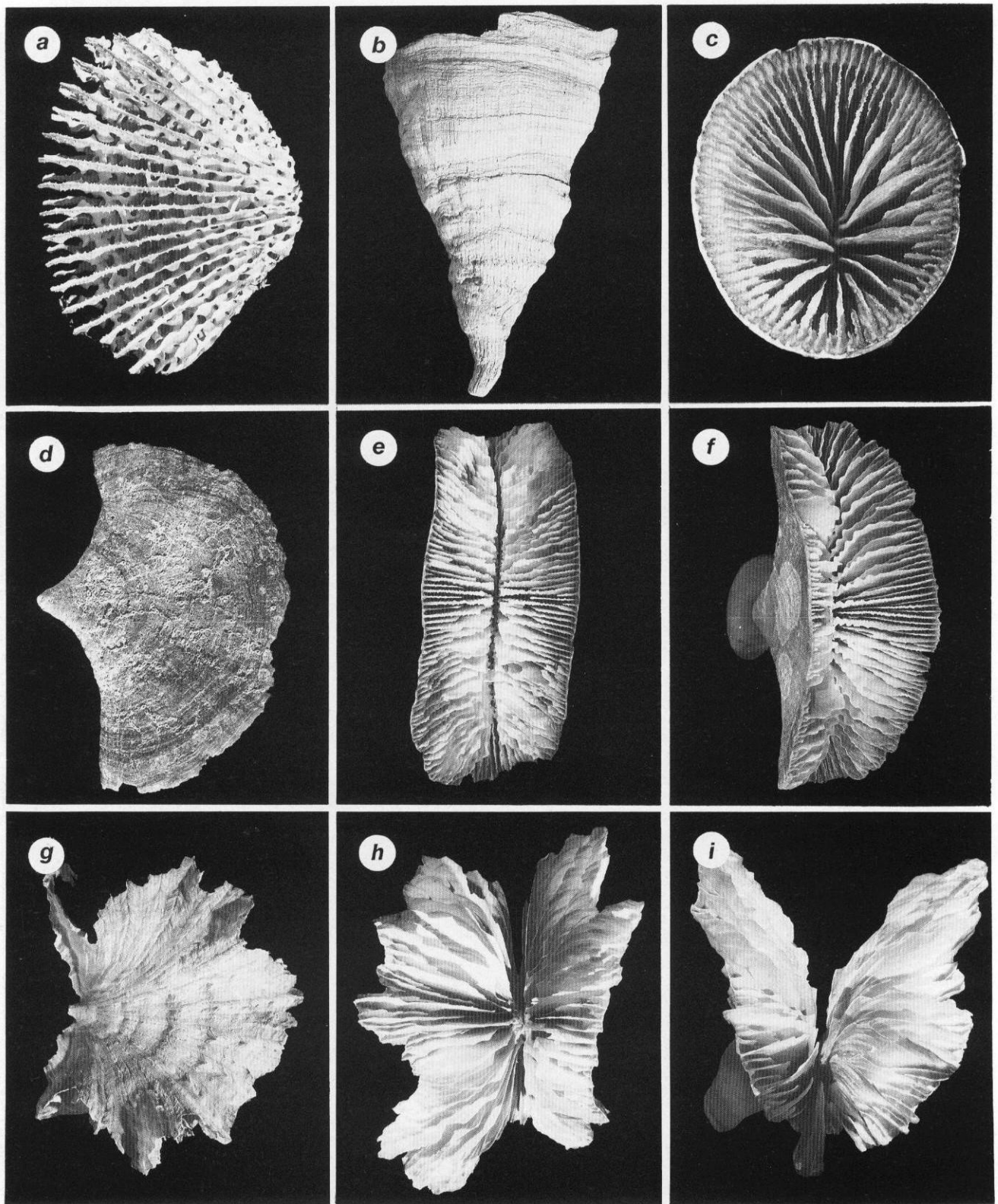


PLATE 32. *Flabellum knoxi* (a, NZOI Stn I716, USNM 94334): a, columellar remnant of a worn specimen, x 1.7. *Flabellum impensum* (b-c, *Eltanin* Stn 2143, USNM 47373): b-c, side and calicular views of same specimen, x 1.6, x 2.0, respectively. *Flabellum angiosomum* (d-f, NZOI Stn I97, USNM 94323): d-f, side, calicular, and oblique calicular views of same specimen, all x 1.4. *Flabellum lowekeyesi* (g, *Eltanin* Stn 1850, USNM 82929; h-i, off Cape Brett, paratype, USNM 45601): g, side view, x 1.2; h-i, calicular and edge views of a paratype, both x 1.2.

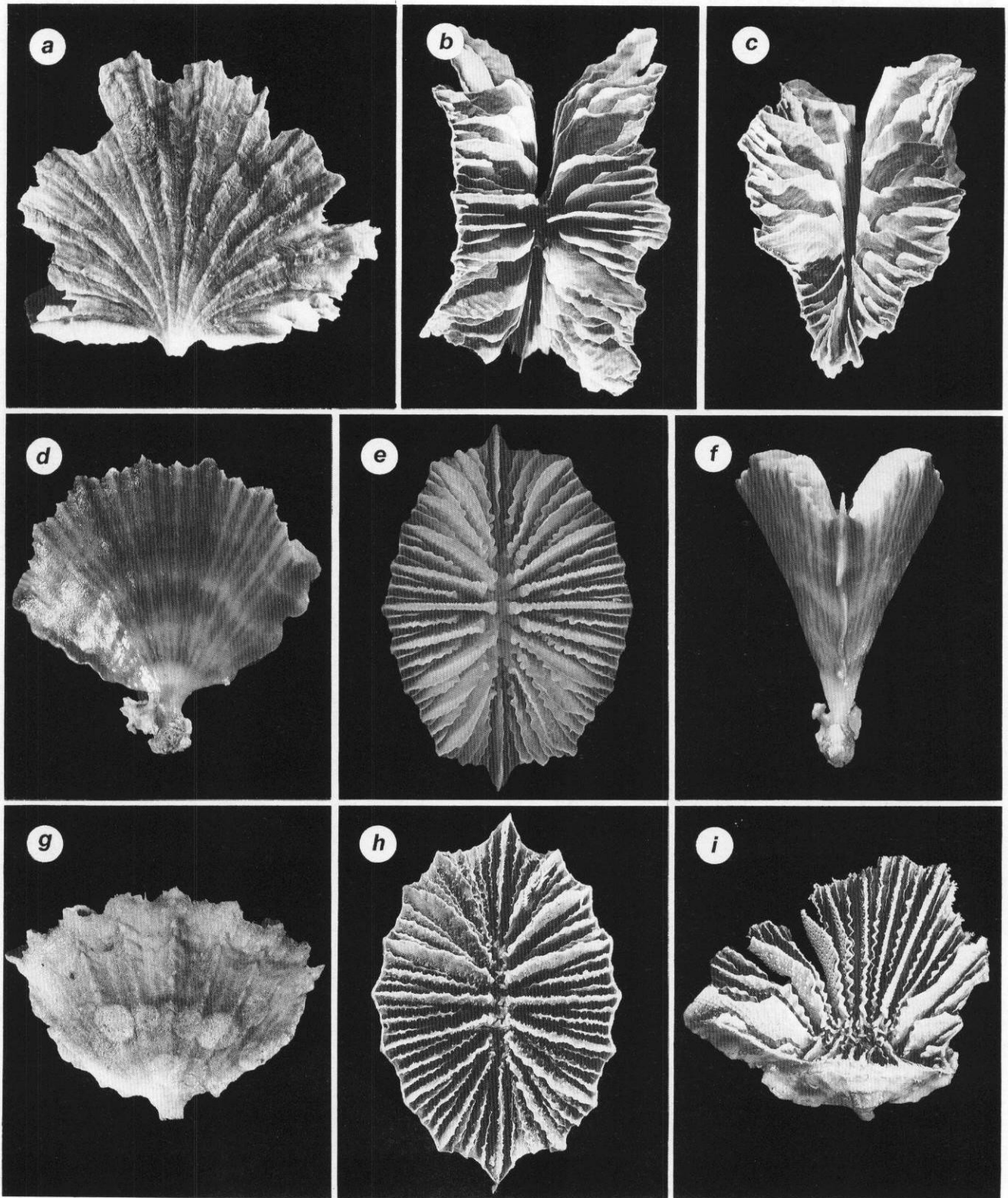


PLATE 33. *Flabellum messum* (a-c, NZOI Stn T226, USNM 94325): a-c, side, calicular, and oblique calicular views of same specimen, all x 1.3. *Flabellum aotearoa* (d-f, NZOI Stn P14, USNM 94336; i, NZOI Stn J699, USNM 94337): d-f, side, calicular, and edge views of same specimen, x 2.0, x 2.3, x 1.9, respectively; i, broken corallum revealing highly sinuous inner septal edges, x 1.8. *Flabellum hoffmeisteri* (g-h, NZOI Stn K829, USNM 94324): g-h, side and calicular views of different specimens, both x 1.6.

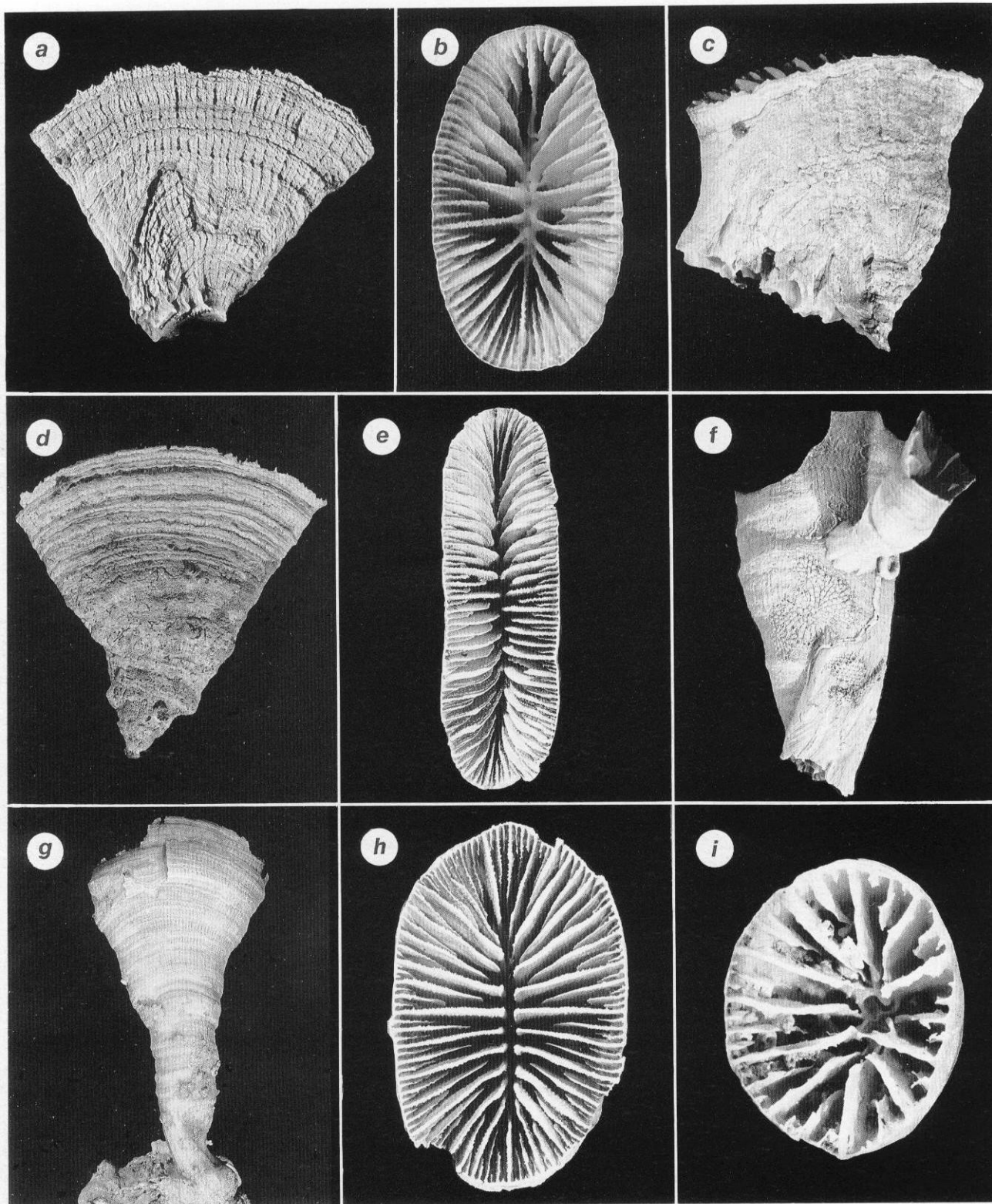


PLATE 34. *Monomyces rubrum* (typical form) (a, NZOI Stn I56, USNM 94349; b-c, NZOI Stn M774, USNM 94353): a, c, side views of two coralla illustrating lateral polycyclic rootlets, x 2.0, x 3.2, respectively; b, calicular view of specimen in figure 34c, x 3.6. *Monomyces rubrum* forma *latum* (d-e, NZOI Stn B200, USNM 80138): d-e, side and calicular views of same specimen, x 1.0, x 1.3, respectively. *Monomyces rubrum* forma *nobile* (f-h, NZOI Stn E848, USNM 94341; i, Stn 932, AIM AK76317): f, corallum base showing elongate contiguous rootlet, x 2.21 g-h, side and calicular views of same specimen, x 0.89, x 1.9, respectively; i, juvenile specimens reported by Ralph and Squires (1962) as *Flabellum gracile*, x 6.3.

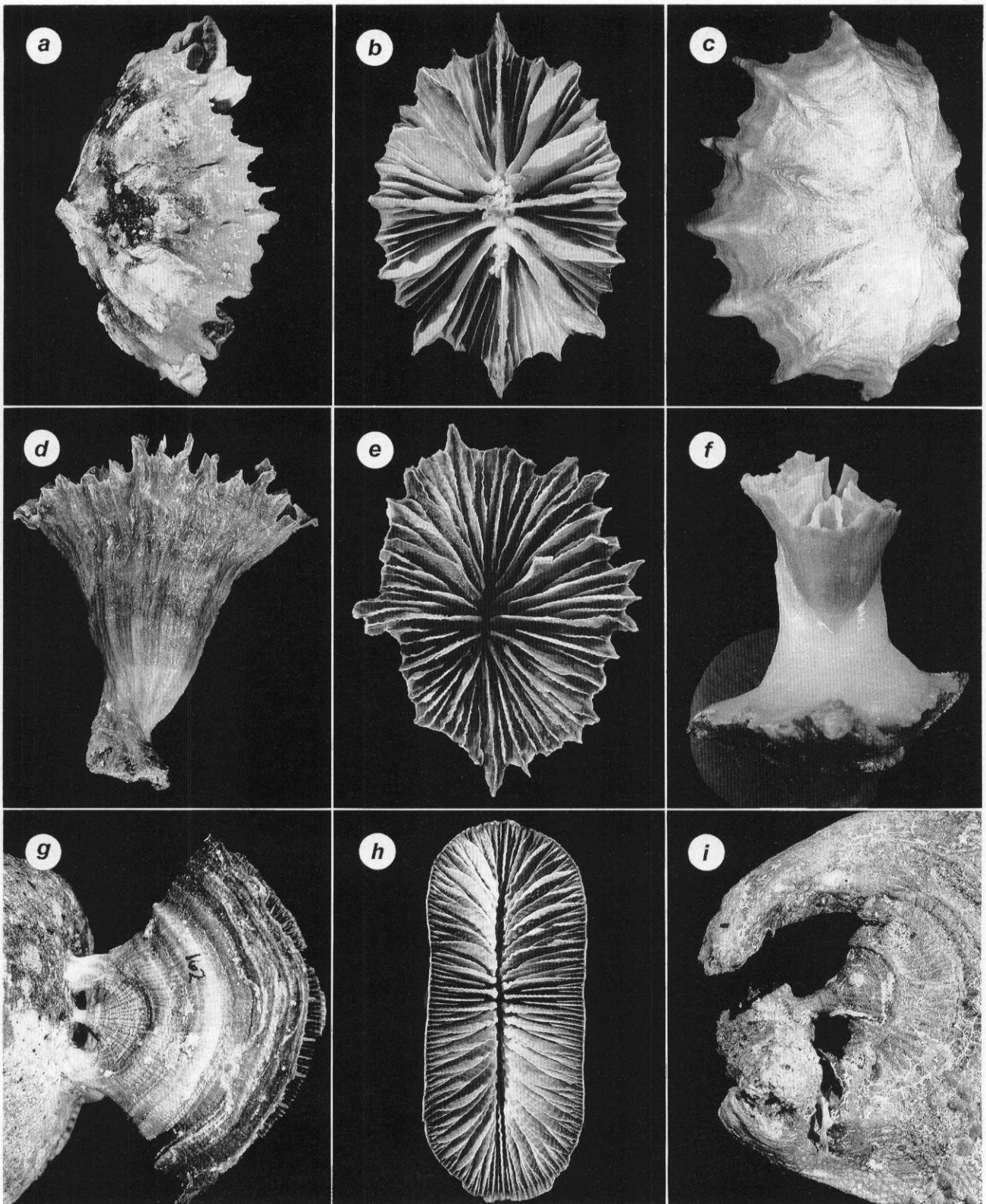


PLATE 35. *Flabellum apertum* (a-b, holotype of *Flabellum raukawaensis*, MoNZ CO186; c, NZOI Stn E757, USNM 94291): a-b, side and calicular views of holotype, both x 1.25; c, oblique basal view, x 1.3. *Polymyces wellsi* (d-f, NZOI Stn E731, USNM 94304): d-e, side and calicular views of same specimen, x 1.25, x 1.6, respectively; f, base of a broken specimen showing contiguous basal rootlets, x 3.6. *Rhizotrochus flabelliformis* (g-h, BS720, MoNZ CO162; i, NZOI Stn P10, USNM 94303): g-h, side and calicular views of same specimen, both x 1.6; i, base of large corallum showing well-developed lateral rootlets, x 1.5.

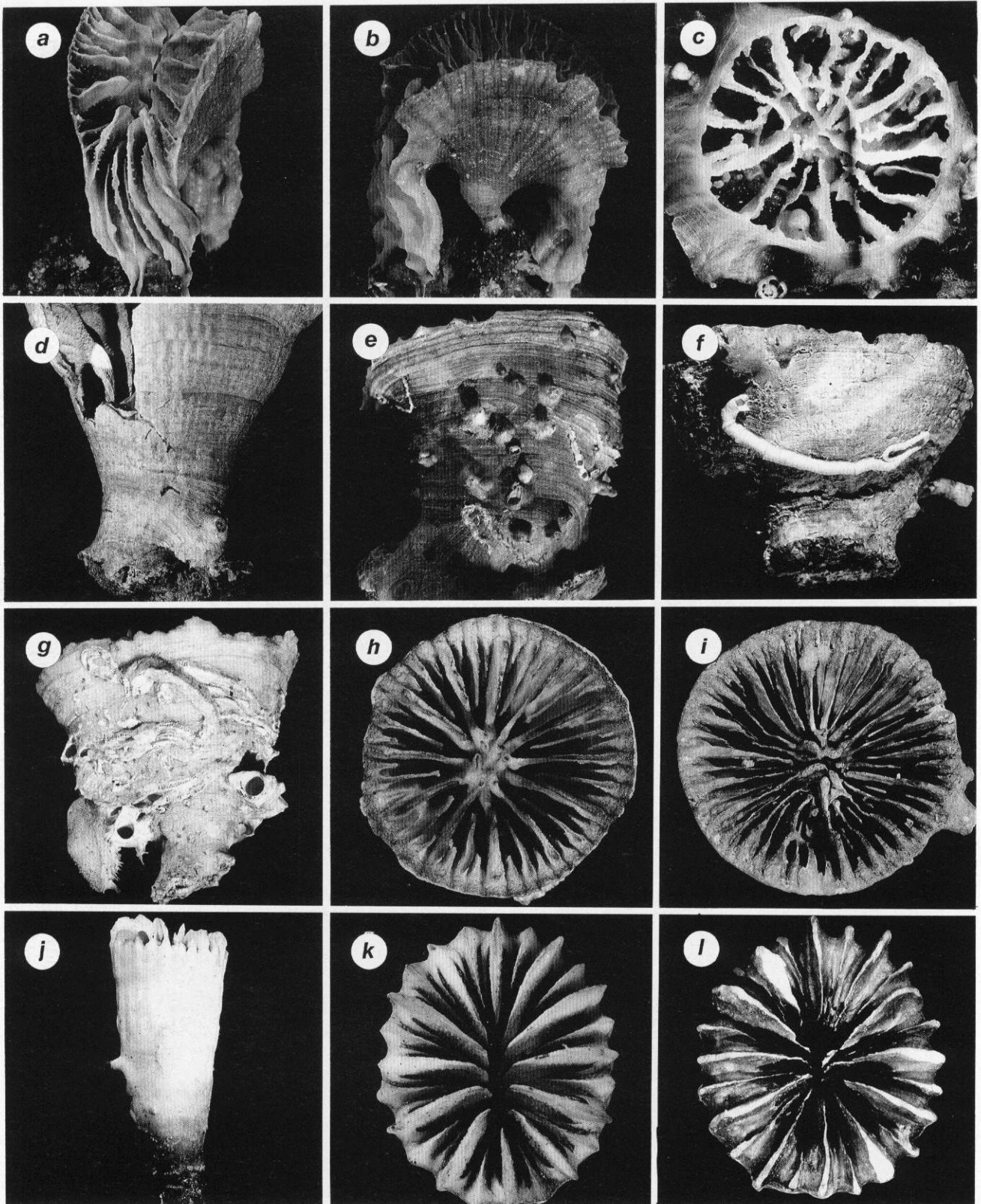


PLATE 36. *Rhizotrochus flabelliformis* (a-b, NZOI Stn J679, USNM 94300): a-b, juvenile corallum in process of anchoring lateral rootlets, x 3.4, x 2.9, respectively. *Gardineria hawaiiensis* (c, e, NZOI Stn K830, USNM 94308; d, NZOI Stn E731, USNM 94306; f, i, NZOI Stn I97, USNM 94307): c, early stage showing polycyclic development, x 3.5; d, large specimen with massive pedicel, x 2.3; e, side view showing epitheca, x 2.5; f, i, side and calicular views of a large specimen, both x 1.7. *Gardineria* sp. (g-h, NZOI Stn I743, USNM 94312): g-h, side and calicular views of a highly encrusted specimen, both x 2.3. *Javania pachythecha* (j-k, holotype; l, NZOI Stn T226, USNM 94286): j-k, side and calicular views of holotype, x 1.7, x 4.3, respectively; l, calicular view of a worn specimen, x 3.9.

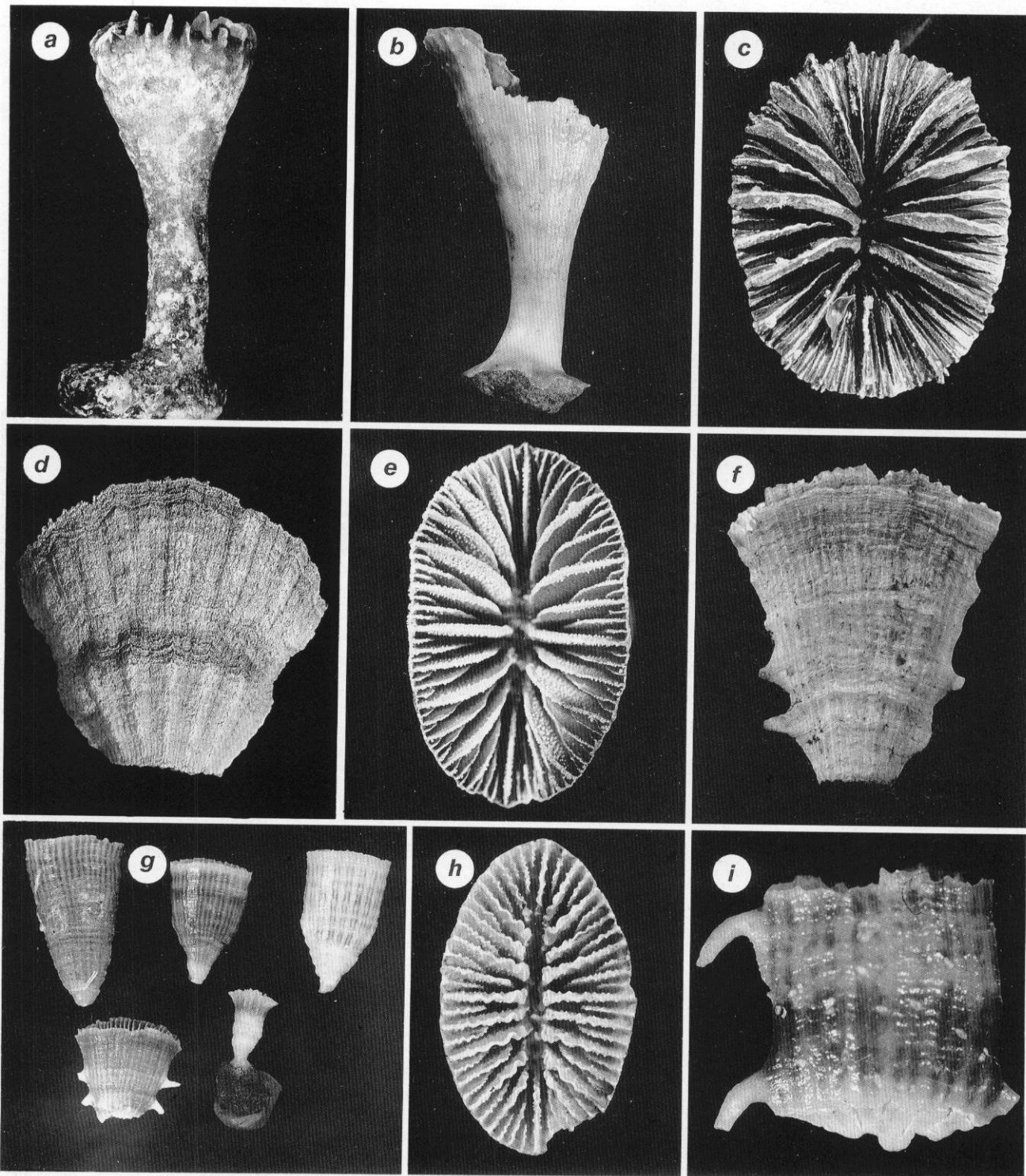


PLATE 37. *Javania pachytheca* (a, NZOI Stn T226, USNM 94285): a, side view, x 2.5. *Javania lamprotichum* (b, NZOI Stn K858, USNM 94283; c, NZOI Stn T256, USNM 94282): b, side view showing stereome-reinforced base, x 1.4; c, view of large, worn corallum, x 1.6. *Truncatoflabellum paripavoninum* (d-e, NZOI Stn T243, USNM 94278): d-e, side and calicular views of same specimen, x 2.1, x 2.6, respectively. *Truncatoflabellum dens* (f, h, NZOI Stn K858, USNM 94274; g, BS441, USNM 94276): f, h, side and calicular views of same specimen, x 3.6, x 4.2, respectively; g, series of five coralla, including four anthocauli and one anthocyathus (lower left), x 1.8. *Truncatoflabellum phoenix* (i, NZOI Stn C531, USNM 82010 paratype): i, side view of a short anthocyathus, x 8.9.

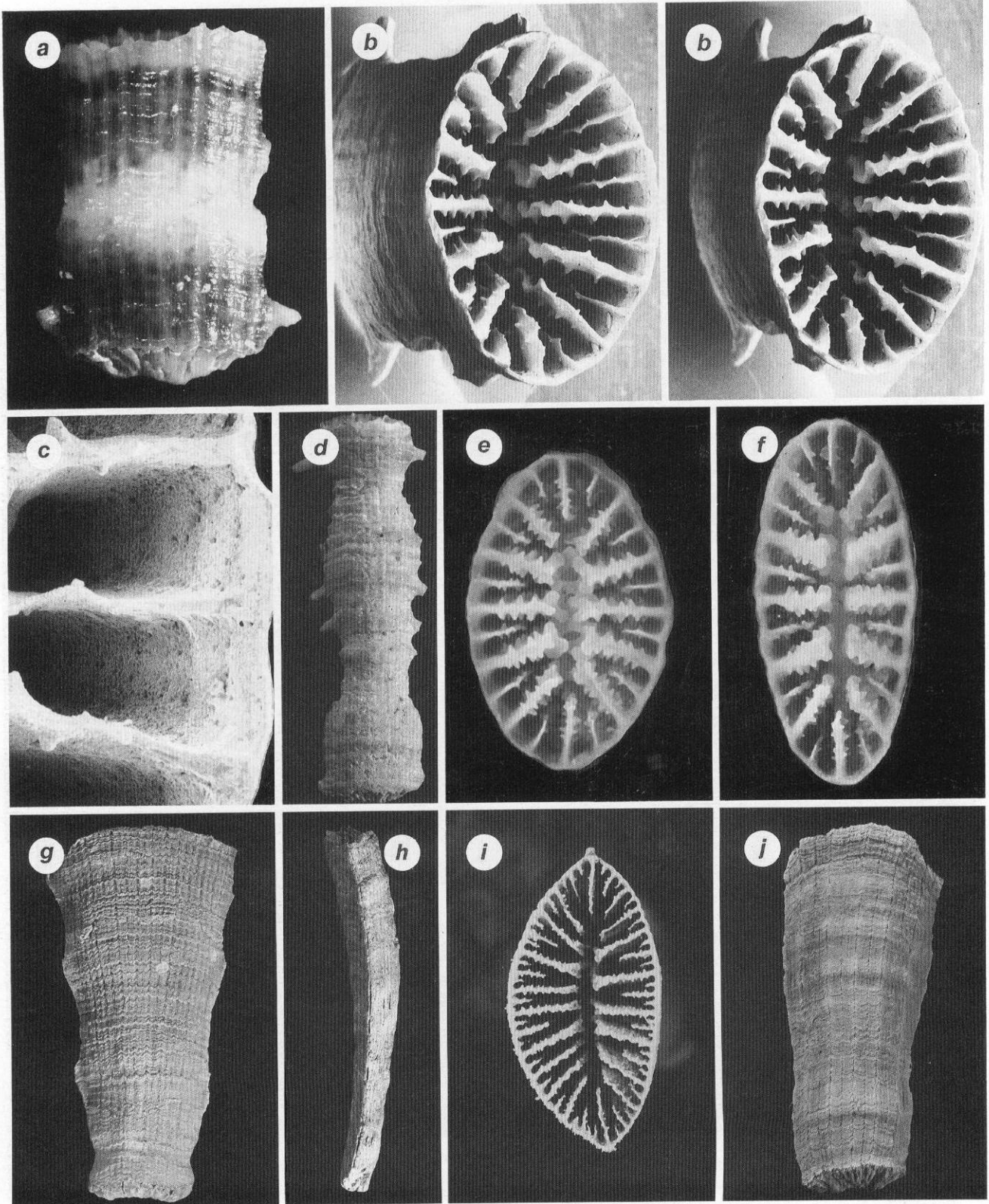


PLATE 38. *Truncatoflabellum phoenix* (ac, e, holotype, USNM 94616; d, f, paratype, NZOI Stn C531, USNM 82010): a, e, side and calicular views of holotype, x 8.1, x 12.4, respectively; b, stereo view of calice of a paratype, x 14.1; c, view from within the calice of three septa, x 66; d, elongate corallum, x 4.1; f, a highly compressed calice, x 13.0. *Truncatoflabellum arcuatum* (g, i, holotype; h, NZOI Stn C640, paratype, USNM 94280): g, i, side and calicular views of holotype, x 2.9, x 4.2, respectively; h, edge view of a worm specimen, x 1.6. *Placotrochides scaphula* (j, NZOI Stn G941, USNM 94273): j, side view of large anthocyathus, x 2.4.

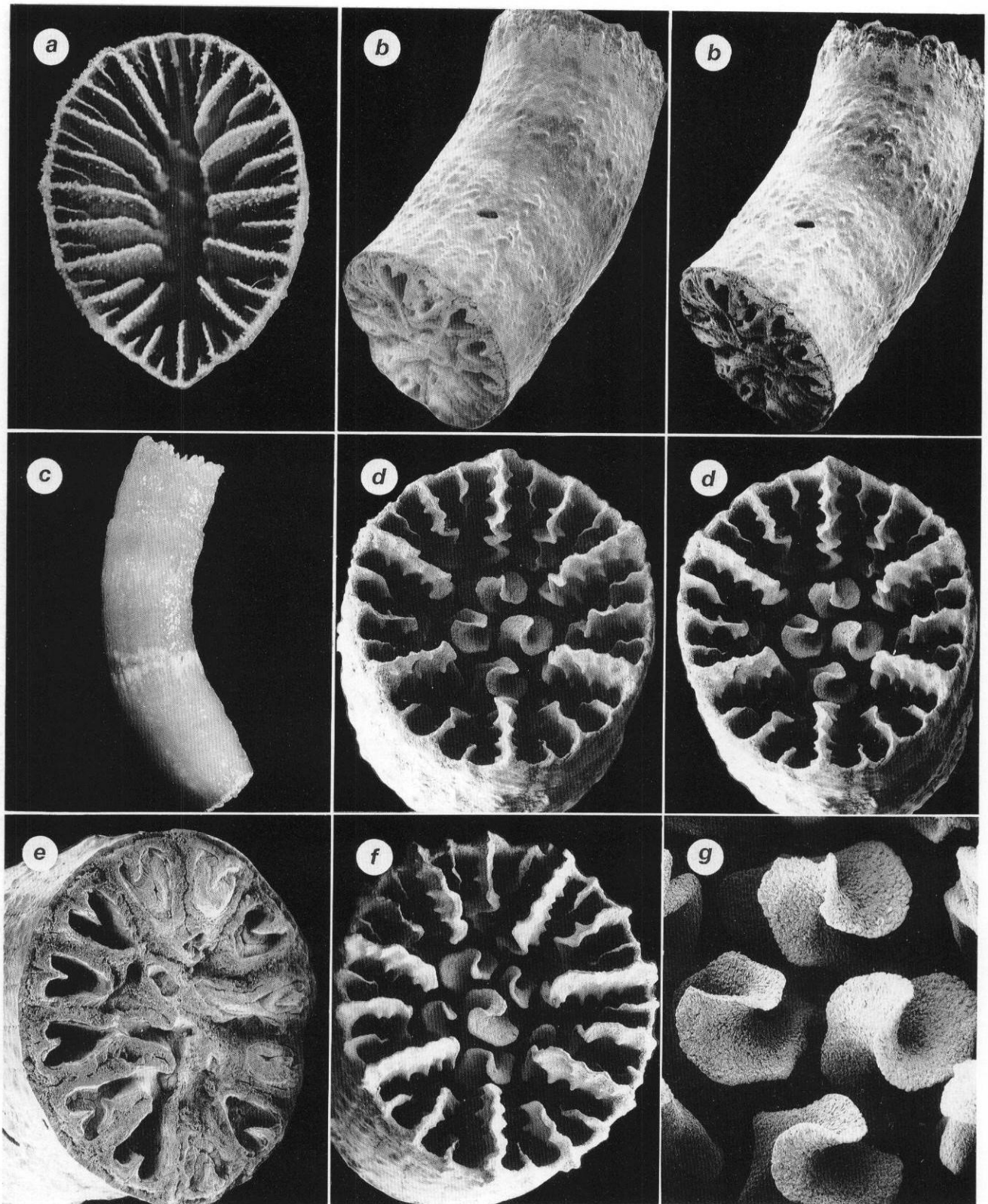


PLATE 39. *Placotrochides scaphula* (a, NZOI Stn G941, USNM 94273): a, calicular view, x 4.9. *Falcatoflabellum raoulensis* (b, d-g, USNM 94313; c, holotype, CO258, MoNZ): b, d, stereo views of side of corallum and calice of hexamerally symmetrical specimen, x 14, x 23, respectively; c, holotype, x 6.3; e, basal attachment scar of anthocyathus, x 25.5; f, calice of specimen with 7 primary septa, x 23; g, enlargement of columella of specimen of fig. 39d, x 69.

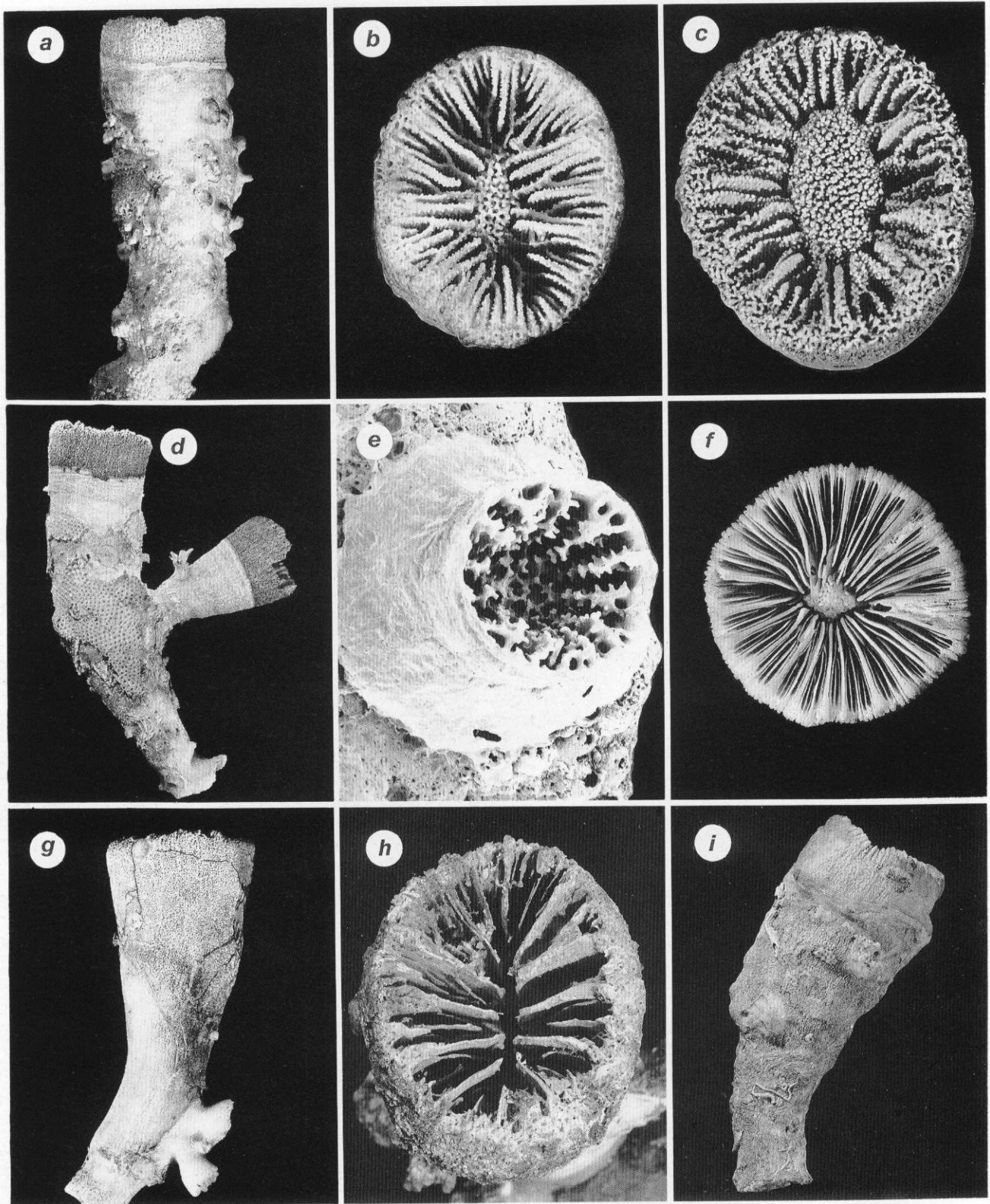


PLATE 40. *Balanophyllia chnous* (a-b, holotype, BM(NH) 1929.10.22.25; c-d, BS897, USNM 94226; e, BS895, MoNZ): a-b, side and calicular views of holotype, x 2.1, x 4.4, respectively; c, calice of specimen with a large columella, x 5.4; d, side view of encrusted corallum, x 1.6; e, juvenile corallum, x 17.6. *Balanophyllia gigas* (f, L1182, AIM AK33937, *Dendrophyllia japonica* of Ralph and Squires (1962); g-h, BS630, MoNZ CO123: f, h, calicular views, x 1.5, x 2.3, respectively; g, side view of a corallum, x 1.2. *Balanophyllia crassithecra* (i, NZOI Stn J686, USNM 94228): i, side view of an elongate corallum, x 1.4.

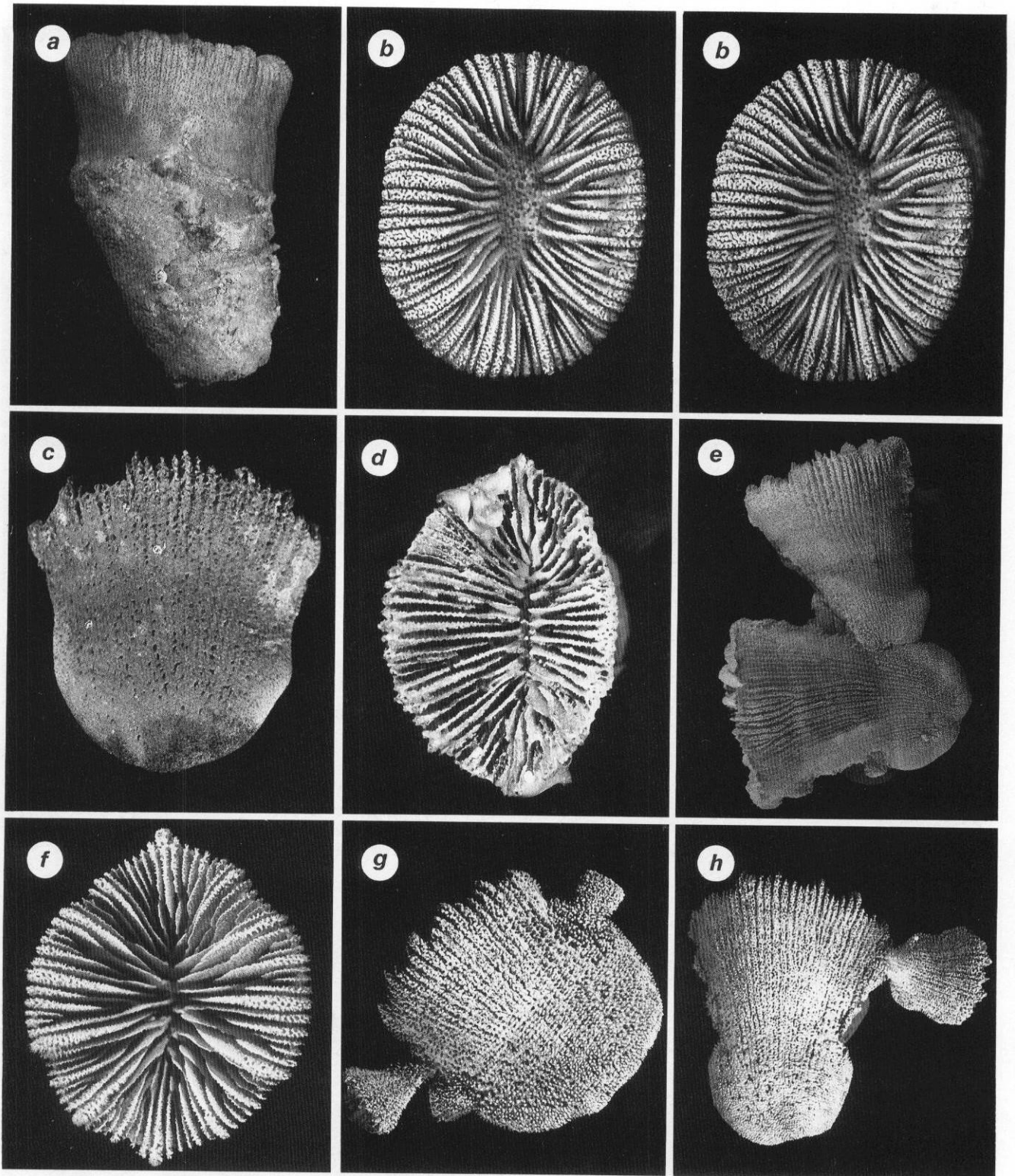


PLATE 41. *Balanophyllia crassitheca* (a-b, holotype): a-b, side and calicular stereo views of holotype, x 2.2, x 3.6, respectively. *Endopachys grayi* (c-d, holotype of *E. oahense*, USNM 20822; e, NZOI Stn P2, USNM 94210; f-g, NZOI Stn P1, USNM 94209; h, NZOI Stn E864, USNM 94208): c-d, side and calicular views of *E. oahense*, x 3.0, x 3.6, respectively; e, g-h, several coralla demonstrating asexual budding from thecal edges, x 1.7, x 3.5, x 2.1, respectively; f, calice, x 3.3.

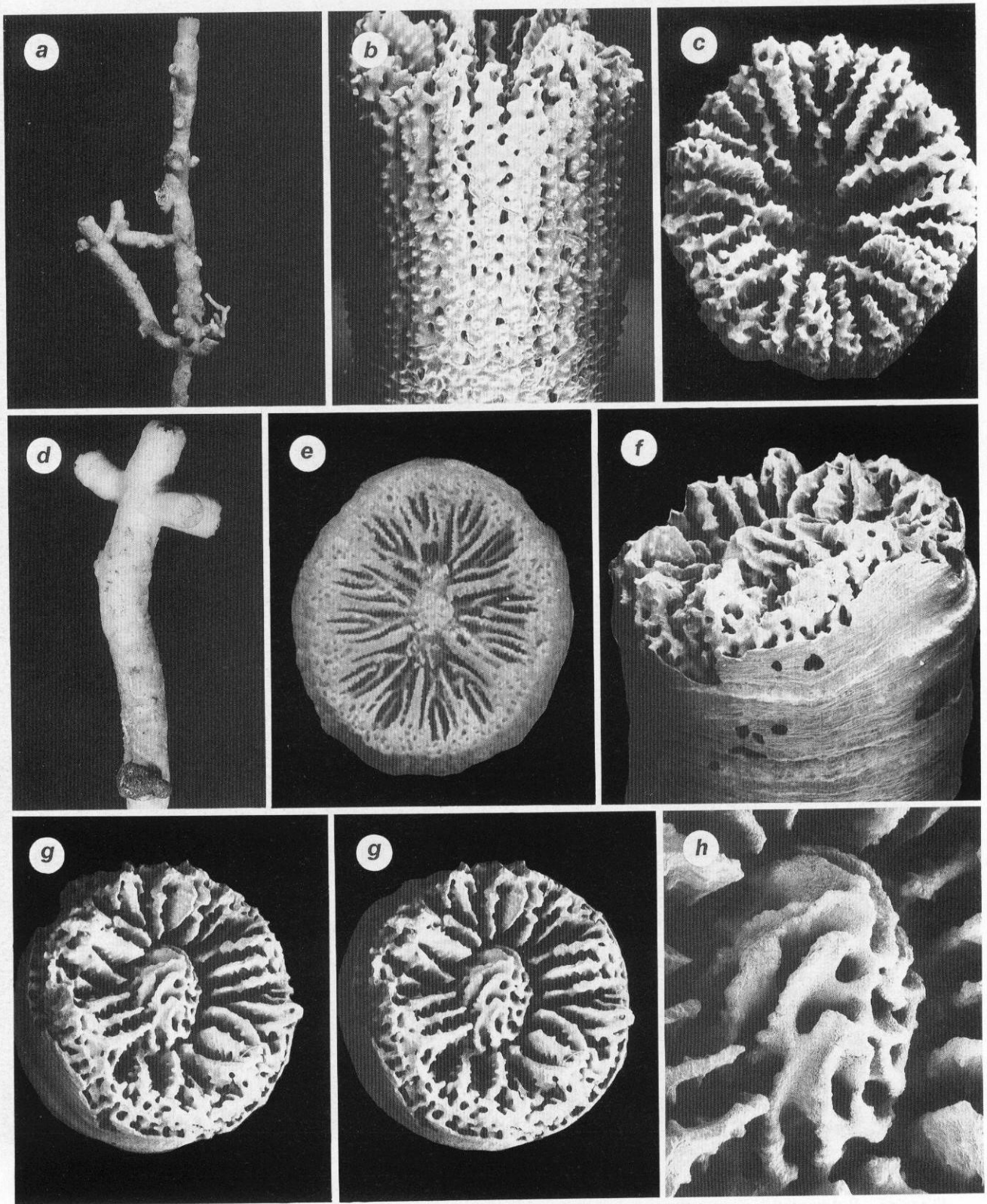


PLATE 42. *Eguchipsammia gaditana* (a, BS310, MoNZ CO83; b-c, NZOI Stn C530): a, colony, x 0.75; b, theca of upper corallite showing epitheca towards base, x 16.6; c, calice, x 16.2. *Eguchipsammia fistula* (d, f-h, NZOI Stn K842, USNM 94240; e, syntype, Siboga Stn 105, ZMA 564): d, colony, x 1.25; e, g, calicular and stereo calicular views, x 6.5, x 12.7, respectively; f, epitheca of upper corallite, x 15.7; h, swirled columella, x 4.0.

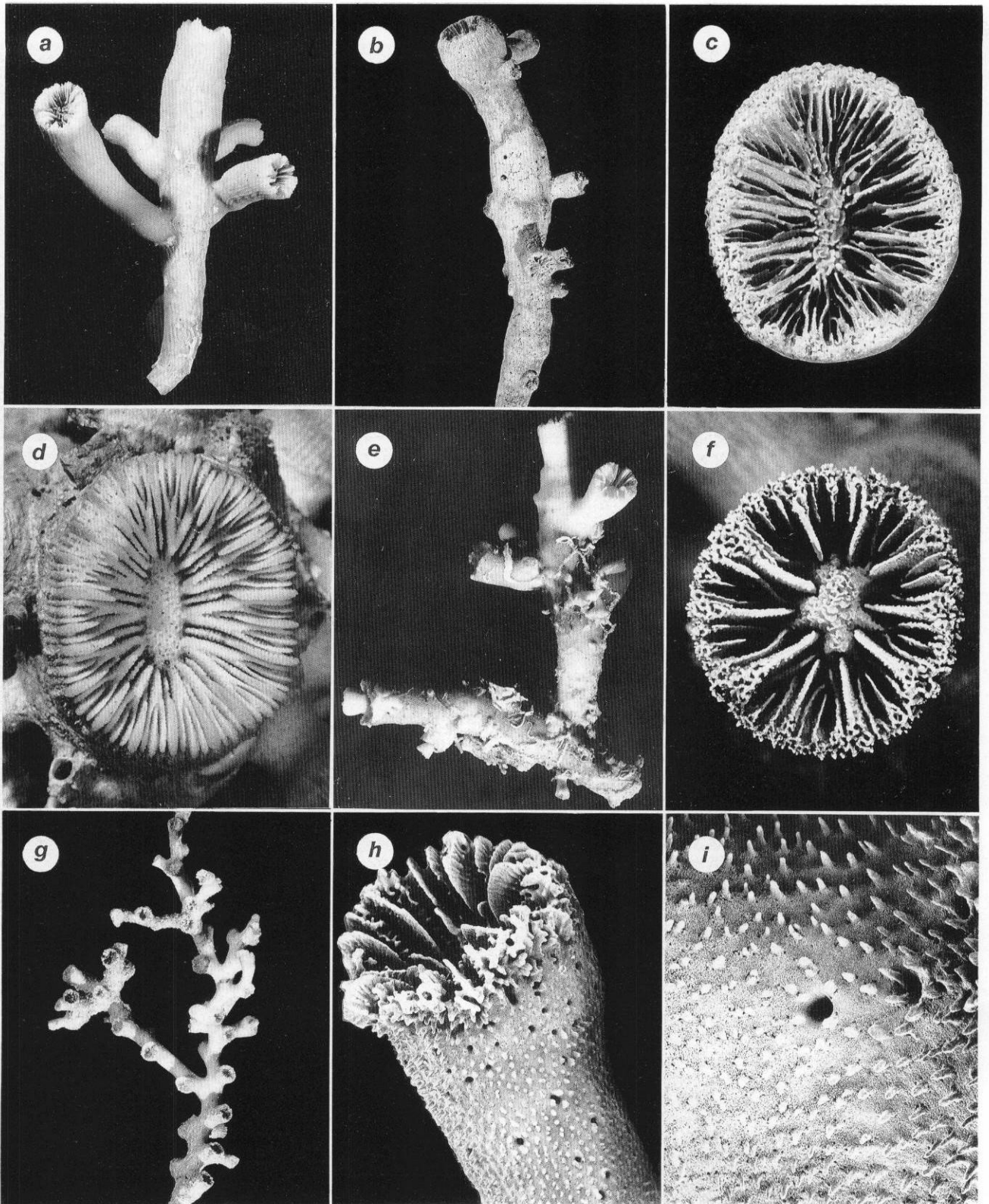


PLATE 43. *Eguchipsammia japonica* (a, NZOI Stn J711, USNM 94214; b-c, *Eltanin* Stn 1718, USNM 79500): a, slender corallites, x 0.95; b, more typical, robust corallum, x 0.48; c, calice, x 2.7. *Cladopsammia eguchii* (d, L1630, AIM AK76949): d, calice, x 4.9. *Dendrophyllia arbuscula* (e-f, BS571, MoNZ CO231): e-f, colony and calice from same colony, x 0.95, x 5.7, respectively. *Dendrophyllia alcocki* (g, NZOI Stn E859, USNM 94260; h-i, NZOI Stn B490, USNM 79490): g, colony, x 0.92; h, oblique view of a distal corallite, x 12.3; i, arrangement of coenosteal spines, x 34.

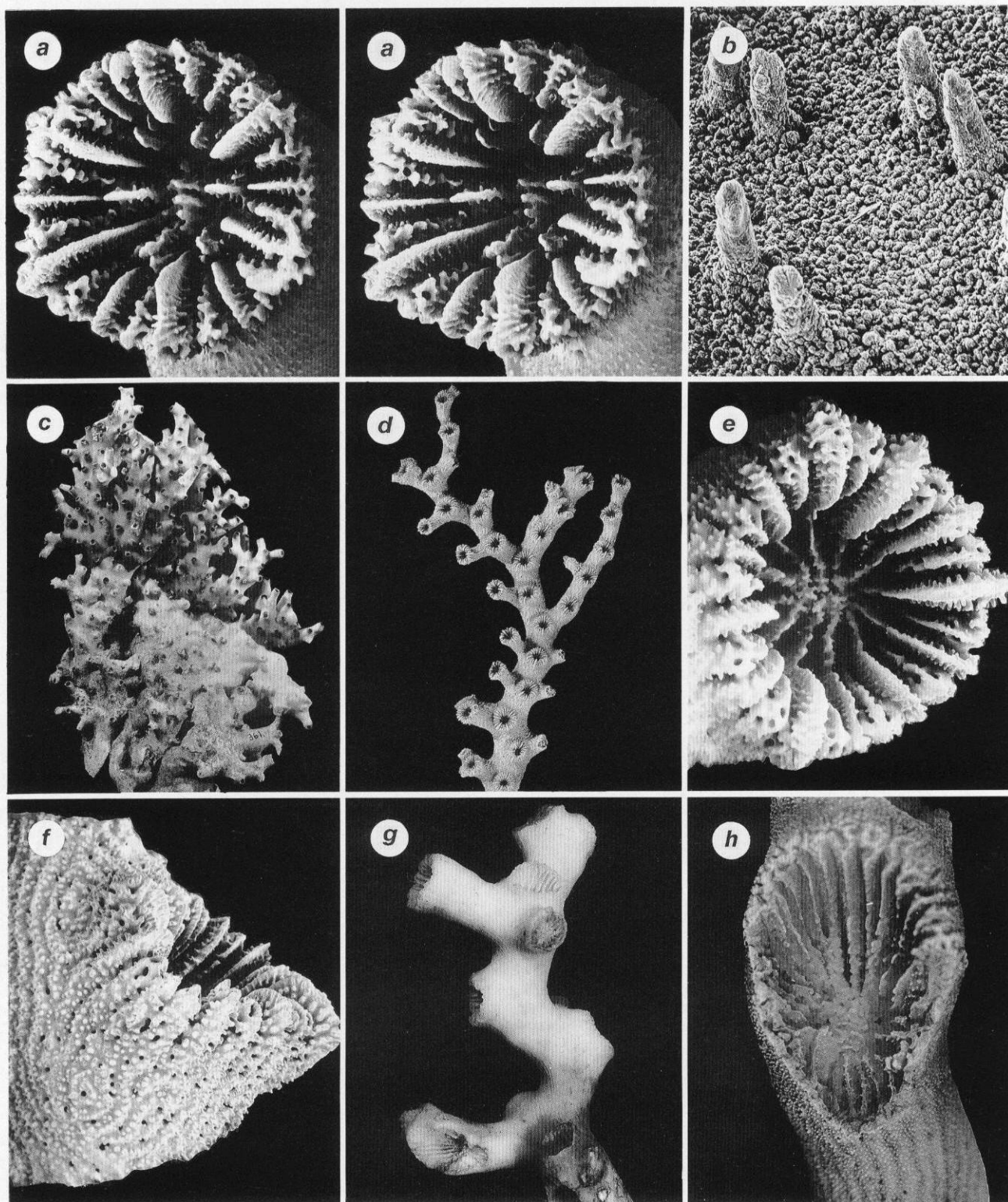


PLATE 44. *Dendrophyllia alcocki* (a-b, NZOI Stn B490, USNM 79490): a, stereo view of a calice, x 14.5; b, coenosteal spines, x 230. *Enallopsammia rostrata* (c, CO361, MoNZ; d, NZOI Stn K846, USNM 94205: e-f, NZOI Stn P8, USNM 94206): c, a massive, unifacial colony, x 0.28; d, branch of the "delicate" form, x 1.3; e-f, calicular and side views of a rostrate corallite, x 12.6, x 10.6, respectively. *Enallopsammia marenzelleri* (g-h, *Eltanin* Stn 1411, USNM 47535): g, a branch, x 1.8; h, broken corallite revealing columella and inner septal edges, x 2.2