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NOTES ON INDONESIAN FRESHWATER ALGAE III
NEW VARIETIES OF SOME LITTLE-KNOWN STAURASTRA
(DESMIDIACEAE)

ARTHUR M. SCOTT * and G. W. PRESCOTT **

SUMMARY

Described and figured are *Staurastrum freemanii* West & West and var. *triquetrum* West & West, with two new varieties, var. *nudiceps* and var. *evolutum*; also three new formae, var. *nudiceps* fa. *biradiatum*, var. *triquetrum* fa. *trispinatum*, and var. *evolutum* fa. *trispinatum*. In *St. saltans* Josh. the specific form was not found, but two new varieties are named, var. *polycharax* and var. *sumatranum*, with a fa. *divergens* of the latter; also two new formae of the species, *St. saltans* fa. *kalimantanum* and fa. *javanicum*. In *St. subsaltans* West & West, var. *indonesianum* and fa. *divergens* are named as new.

Correction. Because of pre-emption the name *Euastrum latum* sp. nov. Krieg. & Scott (1957) is changed to *E. neolatum* Krieg. & Scott.

From among the many rare desmids in the material sent to us by Mr. M. Sachlan of Bogor, Java, we have selected for discussion three species of *Staurastrum*, *St. freemanii* West & West, *St. saltans* Josh., and *St. subsaltans* West & West. These three species in our collections show several series of intergrading and connected forms that shed some additional light on the process of morphological evolution in the desmids.

The following list of habitats includes only the collections to which reference is made in this paper:

Borneo	38. Lake Semedo, W. Borneo.	Coll. K. F. VAAS, June 1949
	43. Lake Tajan, River Kapoeas region, W. Borneo.	" "
	X. A lake, E. Borneo.	" ?
Java	T. Lake near Bogor.	Coll. M. SACHLAN, 1949
	505. Pond near Pengalengan, W. Java.	" April 1954
Sumatra	100. Lebak Danau, near Palembang, S. Sumatra.	" Sept. 1950
	107. Lebak Danau, near Palembang, S. Sumatra.	" Aug. 1951

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Sumatra	108. Danau Teloko, near Palembang, S. Sumatra.	Coll. M. SACHLAN, Aug. 1951
	110. Swamp near Menggala, S. Sumatra.	" "
	114. Mixture of 12 samples from the same swamp.	" Apr. 1955
	147, 148, 149. Kaju Agung, near Palembang, S. Sumatra.	" Dec. 1956
N. Australia	A-108. Pool, pH 6.5, in dried-up stream bed, Oenpelli.	Coll. R. L. SPECHT, Oct. 1948
	A-109. Lagoon, pH 7.6, Oenpelli.	" "
	X-104. Slough at Oenpelli, Arnhem Land.	Coll. R. G. Gregson, April 1954

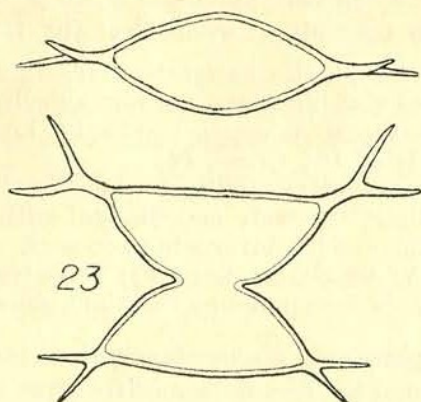
All of our drawings were made to an initial magnification of about 1600, and reduced to about 800 in printing. All dimensions are given in microns, and the following abbreviations are used: L = length; W = width; I = isthmus; T = thickness; ssp = sine spinis; csp = cum spinis; spr = sine processibus; cpr = cum processibus.

We wish to express our thanks to Dr. Hannah Croasdale for providing the Latin translations of the diagnoses, and to Mrs. Dorothy Perine for inking the senior author's pencil drawings.

West & West (1902) described *St. freemanii* and its var. *triquetrum* from Ceylon, and subsequently there seems to be only one mention of either of them in the literature, of the typical form by Crow (1923). In our study of the Indonesian and Australian plants we have found not only these two plants, but also the two new varieties and three new *formae* described below. It seems quite strange, however, that although the triangular forms occur with a fair degree of frequency, we have found only a single specimen of the biradiate typical form, and diligent search of the collection in which it occurred in company with var. *triquetrum* has failed to reveal another example.

1. STAUSTRUM FREEMANII West & West, 1902 — Fig. 1

The only specimen of the typical form that we have seen agrees very well in size and shape with the original description and illustration. In our figure it will be observed that the processes of the upper semicell are solid and those of the lower semicell, presumably the younger one, are hollow. It is known that in other desmids, e.g. *Arthrodesmus maximus* var. *ecplecticus* Scott & Grönb. (1957), the very long and stout spines develop as hollow appendages, which later fill up and become solid when the semicell is mature.



TEXT FIG. 1 *Staurastrum freemanii* var. *nudiceps* Scott & Presc. f. *biradiatum*.

L ssp 27, csp 51; W ssp about 30, csp 72; I 9; T about 16. Habitat: Sumatra 149.

2. *STAURASTRUM FREEMANII* West & West var. *TRIQUETRUM*
West & West, 1902—Fig. 2

The original description of this variety states that the size is somewhat less than that of the species. In our specimens there is not much difference in size, though the total width with spines is a little smaller.

L ssp 27—30, csp 45—50; W spp 27—29, csp 51—63; I 10—11. Habitats: Borneo 38; Sumatra 107, 108, 110, 114; N. Australia A-108, A-109.

3. *STAURASTRUM FREEMANII* West & West var. *nudiceps*, Scott & Prescott
var. nov.—Fig. 3

Varietas a var. *triquetro* W. & W. differens solum absentia trium parium spinarum subparallelarum apicalium horizontaliter directarum. Long. ssp 30, csp 54—60; Lat. ssp 30—33, csp 63—72; Isth. 10.

Differs from var. *triquetrum* W. & W. only in the absence of the three pairs of subparallel horizontally directed apical spines.

L ssp 30, csp 54—60; W ssp 30—33, csp 63—72; I 10. Habitats: Borneo 38, X; Sumatra 148. The type of the variety is designated as the plant shown in our fig. 3.

Our figure shows two of the processes bifid at the end, and the other one trifid, thus showing a tendency toward the trispinate formae of other varieties described below.

4. STAUSTRUM FREEMANII var. NUDICEPS Scott & Presc. f. *biradiatum*
Scott & Prescott, f. *nov.*—Text fig. 1 (23)

Forma a fronte visa plantis varietatis triradiatae magnitudine formae similis; a vertice visa biradiata, corpore subelliptico, polis rotundis, in processus solidos bifurcatos tenues productis. Long. ssp 30, csp 48; Lat. ssp 36, csp 68; Isth. 10; Crass. 18.

In front view size and shape similar to those of the triradiate variety. In vertical view biradiate, the body subelliptical with rounded poles that are prolonged into slender, solid, bifurcate processes.

L ssp 30, csp 48; W ssp 36, csp 68; I 10; T 18. Habitat: Sumatra 148. The type of the forma is designated as the plant shown in our text fig. 1.

It is another remarkable circumstance that just as only a single specimen has been seen of the biradiate specific form of *St. freemanii*, only one example has been found of this biradiate forma of var. *nudiceps*.

5. STAUSTRUM FREEMANII West & West var. *evolutum* Scott & Prescott,
var. nov.—Fig. 4

Varietas a var. *triquetro* W. & W. differens possessione processuum duorum additicorum bifidorum, spinis longis praedictorum utroque in margine laterali a vertice viso. Long. ssp. 27—32, csp 46—68; Lat. ssp 29—32, csp 52—75; Isth. 10—11.

Differs from var. *triquetrum* W. & W. in the possession of two extra bifid processes with long spines on each of the lateral margins as seen in vertical view. L ssp 27—32, csp 46—68; W ssp 29—32, csp 52—75; I 10—11. Habitats: Sumatra 107, 108, 110, 114; N. Australia A-108, A-109. The type of this variety is designated as the plant shown in our fig. 4.

Our figure 7 shows a dichotypical cell combining semicells of var. *triquetrum* and var. *evolutum*. Many such dichotypical specimens have been seen, in both Indonesian and N. Australian material, which seems to show that the evolutionary process is still going on. In a paper on Freshwater Algae from Arnhem Land, which though written and submitted in 1952 is still in press in May 1958, we have illustrated several forms of *St. freemanii* without distinguishing them by varietal names.

6. STAUSTRUM FREEMANII var. TRIQUETRUM West & West f. *trispinatum*,
Scott & Prescott, f. *nov.*—Fig. 5

Forma a var. *triquetro* differens solum processibus in extremitate trifidis non bifidis. Long. ssp 32, csp 68; Lat. ssp 32, csp 60—75; Isth. 9—10.

Differs from var. *triquetrum* W. & W. only in that the processes are trifid at the end instead of bifid.

L ssp 32, csp 68; W ssp 32, csp 60—75; I 9—10. Habitats N. Australia A-108, A-109, X-104. The type of this forma is designated as the plant shown in our fig. 5.

This forma and the next one seem to be confined to Australia; at any rate we have not yet found them in Indonesian material. The specimen here in fig. 5 is the same as illustrated in our Arnhem Land paper fig. 17, no. 6.

7. STAUSTRUM FREEMANII var. EVOLUTUM Scott & Presc. f. **trispinatum**
Scott & Prescott f. *nov.*—Fig. 6

Forma a var. *evolutum* differens solum processibus in extremitate trifidis non bifidis. Long. ssp 30—32, csp 68—70; Lat. ssp. 30—32, csp 62—76; Isth. 10—11.

Differs from var. *evolutum* Scott & Presc. only in that the processes are trifid at the end instead of bifid.

L ssp 30—32, csp 68—70; W ssp 30—32, csp 62—76; I 10—11. Habitats: N. Australia A-108, A-109, X-104.

8. STAUSTRUM SALTANS Joshua, 1886

Joshua (1886) described this plant from Burma, and Turner (1892) recorded it from Bengal, but the illustrations of both these authors are so poor that little idea can be formed of the structure of the plant. West & West (1902) also found it in Ceylon, and stated that Burmese specimens received from Joshua agreed exactly with their Cingalese plants. Present knowledge of *St. saltans* is based very largely upon West & West's illustrations, though the typical form has been recorded from a few other regions, and some European and American varieties have been named. Although some desmidologists may hold a different belief, it seems to be the consensus of opinion that the North and South American plants that have been referred to *St. saltans* do not belong to that species, but are varieties of *St. grallatorium*. This was noted by West & West (1902) and by G. M. Smith (1924). For the differing opinion see Cedercreutz & Grönblad (1936), and Grönblad (1945).

We have seen a large number of specimens of several different forms of *St. saltans*, but quite strangely none of them are identical with the typical form, though some of them resemble it in front view. West & West's description mentions a ring of minute denticulations at the base of each semicell, also indicated in Joshua's drawing, but not present in any of our examples, nor shown by HIRANO (1950). West & West mention and depict "four rounded eminences" projecting considerably above the

apex of the semicell, to which the two pairs of horizontal spines are attached; in our plants the pairs of spines project subhorizontally from inflated bases that are much less prominent than in West & West's illustration. The greatest difference, however, is in the vertical view, which West & West show as fusiform with only a moderate median swelling, and Hirano shows a similar swelling distinctly flattened on each side. In all of our several varieties and *formae* the vertical view is not fusiform, but is abruptly and largely inflated in the center, the inflation reaching almost grotesque proportions in the instance of var. *polycharax* Scott & Presc. A point to which we invite attention is that the horizontal spines often have a small spur or tooth at the "heel" or top of the inflated base, and when this occurs it is sometimes only the right front and left rear spines (of the upper semicell) that have the spur, the other two spines, diagonally opposite, being smooth. In the Australian specimen shown in fig. 18, it will be seen that the spur has developed into an upwardly directed spine of equal length with the horizontal one. We have noted a somewhat similar phenomenon in *Spinocosmarium quadridens* (Wood) Presc. & Scott, (Scott & Prescott 1949).

9. STAUSTRUM SALTANS Josh. var. *sumatranum* Scott & Prescott,
var. *nov.*—Fig. 8-10

Longitudo cellulae quasi eadem atque in specie, latitudo aliquantum maior ob processus longiores. Planta a fronte visa speciei similis, sine, autem, denticulationibus minutis in basi semicellulae sine necnon eminentiis apicalibus magnis, signo circulari subflavum vel subbruneo incrassationem internam indicante praedita; processus multo longiores, in extremitate furcati, dente superiore furcae quam inferiore interdum longiore, dente parvo additico in cavo furcae interdum viso; margines dorsales processum dentati non verrucosi, spina una perlonga recurvata in extremitate proximali, dentibus ad extremitatem distalem aequae imminutis, marginibus ventralibus dentatis aut serratis. Semicellula a vertice visa corpus magnum abrupte inflatum incrassatione interna quoque in latere praeditum atque duo paria spinarum crassarum ad processus subparallelarum praebens; corpus quaque in extremitate in processum longum tenuem aequae attenuatum, marginibus undulatis, ordine centrali dentium, dente proximali multo maiore quam aliis praeditum; extremi processus in spinam, dentem superiorem furcae a fronte visa repraesentantem, abrupte attenuati, interdum dente parvo additico utroque in latere in basi spinae terminalis praediti. Long. ssp 32—38, esp 40—44; Lat. cpr. 85—100; Isth. 9—10; Crass. 21.

Length of cell about the same as in the species, width considerably greater because of the longer processes. Front view similar to that of the species, but lacking the minute denticulations at the base of the semicell,

and without the large apical eminences; subapically a large yellowish or brownish marking indicating an internal incrassation; processes much longer, furcate at their ends, with the upper branch of the fork sometimes longer than the lower one, and sometimes with an additional small tooth visible in the hollow of the fork; dorsal margins of the processes dentate instead of verrucose, with one very long recurved spine at the proximal end, the teeth diminishing in size toward the distal end; ventral margins dentate or serrate. In vertical view an abruptly and largely inflated body with an internal incrassation on each side, and two pairs of stout spines subparallel with the processes; body prolonged at each end into a long, slender, uniformly tapered process with undulate margins and a central row of teeth of which the proximal one is much larger than the others; ends of processes abruptly attenuated into a spine representing the upper branch of the fork visible in front view, and sometimes with an additional small tooth at each side of the base of the terminal spine.

L ssp 32—38, csp 40—44; W cpr 85—100; I 9—10; T 21. Habitats: Sumatra 100, 108, 114. The type of this variety is designated as the plant shown in our figs. 8-10.

10. *STAUSTRUM SALTANS* Josh. var. *SUMATRANUM* Scott & Presc. f.
divergens Scott & Prescott, f. nov.—Fig. 11

Forma a var. *sumatranum* differens processibus divergentibus non convergentibus. Long. spr 33, cpr 44; Lat. cpr 85; Isth. 9.

Differs from var. *sumatranum* Scott & Presc. in that the processes are divergent instead of convergent.

L spr 33, cpr 44; W cpr 85; I 9. Habitat: Sumatra 100. The type of this forma is designated as the plant shown in our fig. 11.

11. *STAUSTRUM SALTANS* Joshua var. *kalimantanum* Scott & Prescott,
var. nov.—Fig. 12

Varietas longitudine atque latitudine quasi similis speciei, a fronte visa similis, sinè, autem, denticulationibus minutis in basi semicellularum, apice magis elevato, sine, autem, eminentiis apicalibus; signum circulare subflavum vel subbruneum sub apice incrassationem internam indicans; processus in parte extrema inaeque furcati, dente superiore multo longiore quam inferiore; margo processus dorsalis 6 vel 7 paria dentium obtusorum truncatorumve, dentibus proximalibus 3 vel 4 manifeste emarginatis tamquam in specie, habens. Semicellula a vertice visa corpus admodum inflatum habens; corpus incrassatione interna utroque in latere atque duobus paribus spinarum crassarum sibi ac processibus subparallelarum praeditum, corpus in duobus processibus longis tenuibus aequè attenuatis productum; processus marginibus undulatis, atque ordinibus duobus dentium, dentibus 3 vel 4 proximalibus emarginatis, praediti, in parte extrema in spinam longam, dentem superiorem furcae a fronte visa repraesentantem, abrupte attenuati. Long. ssp 39, csp 43; Lat. cpr 88; Isth. 12; Crass. 37.

Length and width about the same as in the species. Front view similar to that of the species, but lacking the minute denticulations at the base of the semicells, apex more elevated but without the apical eminences;

subapically a yellowish or brownish circular marking indicating an internal incrassation; processes unequally furcate at the end, the upper branch of the fork much longer than the lower; dorsal margin of processes with six or seven pairs of blunt or truncate teeth, of which the proximal three or four are distinctly emarginate as in the specific form. In vertical view an abruptly and greatly inflated body with an internal incrassation on each side, and two pairs of stout spines subparallel with each other and with the processes; body prolonged at each end into a long, slender, uniformly tapered process with undulate margins and two rows of teeth of which the proximal three or four are emarginate; ends of processes abruptly attenuated into a long spine representing the upper and longer branch of the fork seen in front view.

L ssp 39, csp 43; W cpr 88; I 12; T 27. Habitat: Borneo X. The type of this variety is designated as the plant shown in our fig. 12.

This variety is named for Kalimantan, the new Indonesian name for Borneo, and also the name of one of the aboriginal tribes who inhabited the island.

12. STAUSTRUM SALTANS Joshua var. *javanicum* Scott & Prescott,
var. nov.—Figs. 13-15

Varietas longitudine atque latitudine cum processibus speciei quasi similes, a fronte visa speciei similis sine, autem, denticulationibus minutis in basi semicellularum, apex magis elevatus, sine, autem, eminentiis apicalibus, sub apice signum circulare subflavum vel subbruneum, incrassationem internam indicans, praebens; processus extrema in parte inaeque furcati, dente superiore furcas multo longiore quam inferiore, in margine dorsali 2 vel 5 paria dentium acutorum, pari proximali aliquantam longiore quam aliis, ferentes. Corpus a vertice visum abrupte admodum inflatum, incrassatione interna utroque in latere atque duobus paribus spinarum crassarum, quaque calcar parvum ferente, sibi ac processibus subparallelarum praeditum, corpus extrema in parte quaque in processum brevem crassum, marginibus undulatis productum; margines 2 vel 5 paria dentium acutorum, pari proximali longiore quam aliis, atque spinam terminalem crassam, dentem superiorem longiorem furcae a fronte visae repraesentem, habentes. Long. ssp 36—37, csp 39—41; Lat. cpr 59—70; Isth. 10—11; Crass. 25—27.

Length and width processes about the same as in the species. Front-view similar to that of the species, but lacking the minute denticulations at the base of the semicells, apex more elevated but lacking the apical eminences; subapically a yellowish or brownish circular marking indicating an internal incrassation; processes unequally furcate at the end, the upper branch of the fork much longer than the lower; dorsal margin of the processes with two to five pairs of sharp teeth, of which the proximal pair is considerably larger than the others. In vertical view an abruptly and greatly inflated body with an internal incrassation on each side, and two pairs of stout spines, each bearing a small spur, subparallel with each other and with the processes; each end of the body

prolonged into a short stout process with undulate margins and two to five pairs of sharp teeth, of which the proximal pair is longer than the others; ends of processes abruptly attenuated into a stout spine representing the upper and longer branch of the fork seen in front view.

L ssp 36—37, csp 39—41; W cpr 59—70; I 10—11; T 25—27. Habitat: Java 505. The type of this variety is designated as the plants shown in our figures 13-15.

This variety has been found in only one collection, and it shows considerable variation in the length of the processes, as is evident from our illustrations. In the compact short-armed forms there is usually only one pair of teeth at the proximal end of the processes, the remaining teeth being unpaired and located on the center-line.

13. STAUSTRUM SALTANS Joshua var. **polycharax** Scott & Prescott,
var. nov.—Figs. 16-18

Longitudo cellulae aliquantulum maior quam in specie, latitudo cum processibus quasi eadem. Forma cellulae a fronte visae plerumque similis formae speciei, habens, autem, differentias perspicuas: denticulationes basales absentes, apex magis elevatus, sine, autem, eminentiis apicalibus, sub apice signum circulare subflavum vel subbruneum, incrassationem internam indicans; margo dorsalis processuum ordinem unum 3 vel 5 dentium, proximalibus 2 vel 3 longissimis crassissimisque aliquantam super apicem eminentibus, ferens; partes extremae processuum inaeque furcatae, dente superiore furcae longissimo crassissimoque, inferiore ad dentem parvum in latere inferiore amplicationis bulbosae atque as duos dentes parvos additos, uno in superficie superiore, altero in inferiore amplificationis saepe redacto. Corpus a vertice visum abrupte ac magnopere inflatum, marginibus fere rectis, incrassatione interna utroque in latere, duobus paribus spinarum crassarum, quaque calcar parvum plerumque ferente, sibi processibusque subparallelarum praeditum; corpus extremis in partibus in processus crassos productum, marginibus undulatis atque ordine centrali 3 vel 5 spinarum crassissimarum praeditum; partes extremae processuum in spinam longam crassissimam, dentem superiorem longioremque furcae a fronte visae repraesentem, atque in spinam minorem utroque in basi spinae longae, abrupte attenuatae. Long. ssp 39—43, csp 50—54; Lat. cpr 72—88; Isth. 9—11; Crass 29—30.

Length somewhat greater than that of the species, width with processes about the same. Shape of the cell in front view generally similar to that of the species, but with striking differences; basal denticulations absent; apex more elevated but lacking the apical eminences; subapically a yellowish circular marking indicating an internal incrassation; dorsal margins of processes armed with a single row of three to five teeth, of which the proximal two or three are extremely long and stout, projecting considerably above the apex; ends of processes unequally furcate, the upper branch of the fork extremely long and stout, the lower branch frequently reduced to a small tooth on the lower side of a bulbous enlarge-

ment, and two other small teeth, one on the upper and one on the under face of the enlargement. In vertical view an abruptly and extremely inflated body with almost straight margins and an internal incrassation on each side, and with two pairs of stout spines, each usually bearing a small spur, subparallel with each other and with the processes; ends of the body prolonged into stout processes with undulate margins and a central row of three to five very stout spines; ends of processes abruptly attenuated into a long and very stout spine representing the upper and longer branch of the fork seen in front view, and a smaller spine at each side of the base of the long spine.

L ssp 39—43, csp 50—54; W cpr 72—88; I 9—11; T 29—30. Habitats: Java T; N. Australia A-109, X-104. The type of this variety is designated as the plants shown in our figs. 16-18.

At first sight this extraordinary desmid gives the impression of something monstrous, chimerical, but there are many of them to be found in the Java collection, and a form with essentially the same structure though slightly less pronounced features occurs in fair numbers in the two Australian collections, showing that neither of them is abnormal.

14. STAURASTRUM SUBSALTANS West & West var. *indonesianum*,
Scott & Prescott, *var. nov.*—Figs. 19-20

Magnitudo varietatis speciei quasi eadem, quamquam latitudo cum processibus interdum aliquantum amplior est. Corpus a fronte visum angustius, inflatione basali semicellulae interdum levi, plerumque, autem, verrucam emarginatam parvam utroque in latere praebens; sub apice signum circulare subflavum incrassationem internam indicans; apex duobus dentibus parvis inter paria spinarum subhorizontalium visibilibus praeditus. Semicellula a vertice visa fusiformis, corpore aliquantulum inflato incrassationem internam utroque in latere atque duo paria spinarum subparallelarum, inter quae duo paria dentium minorum, habente; margo dorsalis processuum ordines dentium duos vice unius, dentibus in partibus proximalibus plerumque truncatis emarginatisve, ferens. Long. ssp 32—36; Lat. cpr 58—81; Isth. 7—8; Crass. 13—17.

Size about the same as in the species, though the width with processes is sometimes considerably greater. In front view body narrower, the basal inflation of the semicell sometimes smooth but usually with a small emarginate verruca on each side; subapically a yellowish circular area indicating an internal incrassation; apex provided with two small teeth visible between the pairs of subhorizontal spines. In vertical view fusiform with a moderately inflated body having an internal incrassation on each side and two pairs of subparallel spines with two pairs of smaller teeth between them; dorsal margin of processes with two rows of teeth instead of one, the teeth at the proximal ends of processes usually truncate or emarginate.

L ssp 32—36; W cpr 58—81; I 7—8; T 13—17. Habitats: Borneo 38, 43, X; Sumatra 114. The type of this variety is designated as the plant shown in our figs. 19-20.

15. STAUSTRUM SUBSALTANS West & West var. *INDONESIANUM* Scott & Presc. f. *divergens* Scott & Prescott, f. *nov.*—Figs. 21-22

Forma a var. *indonesiano* differens processibus paululum divergentibus, non horizontalibus aut aliquantulum convergentibus. In hac forma duo paria dentium apicalium minorum cum spinis maioribus, calcaria formantis, coniunguntur. Long. spr 34—36, cpr 47—49; Lat. cpr 67—73; Isth. 7—8; Crass. 15.

Differs from var. *indonesianum* in that the processes are slightly divergent instead of being horizontal or somewhat convergent. In this form the two pairs of smaller apical teeth are united with the larger spines, forming spurs on them.

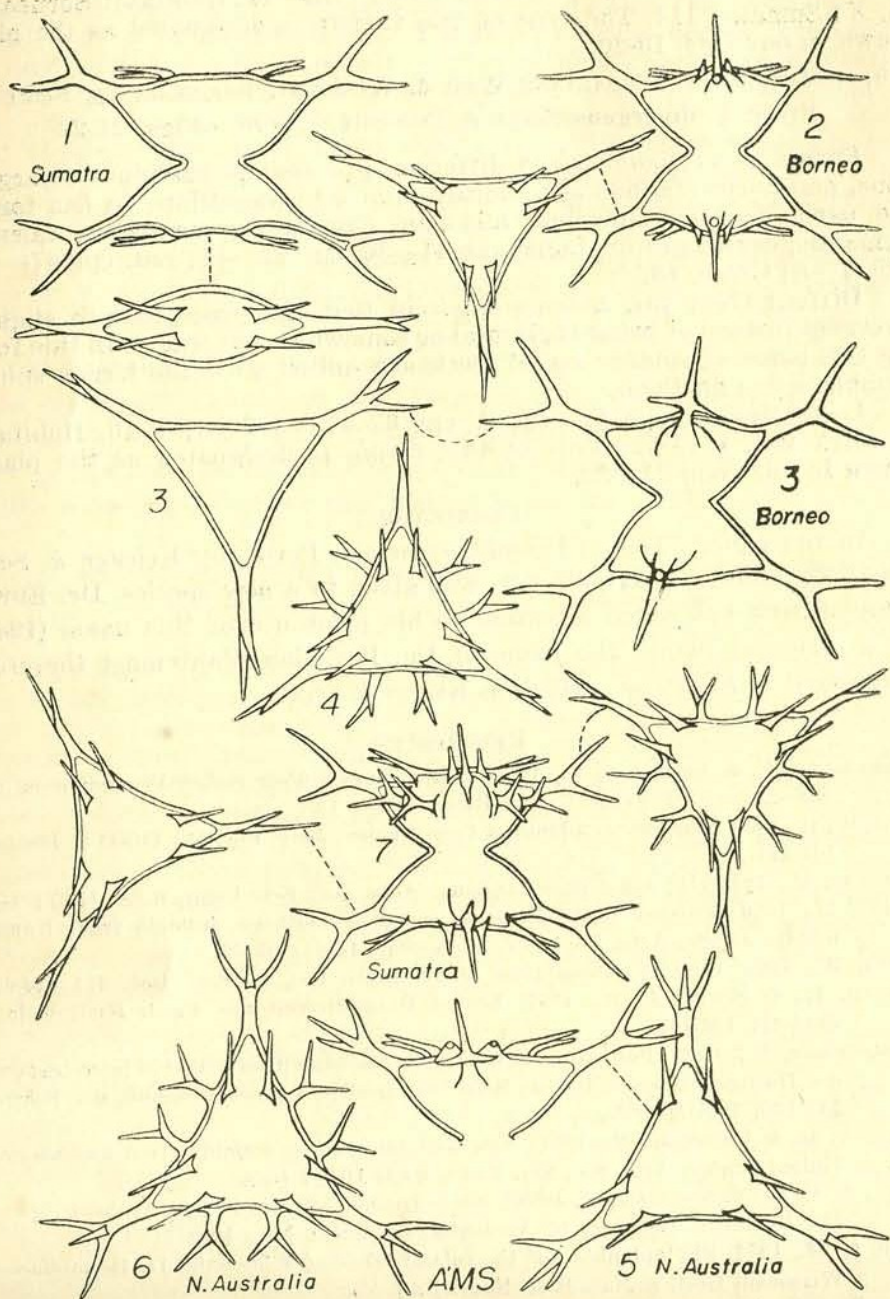
L spr 34—36, cpr 47—49; W cpr 67—73; I 7—8; T 15. Habitats: Sumatra 108, 114. The type of this *forma* is designated as the plants shown in our figs. 21—22.

CORRECTION

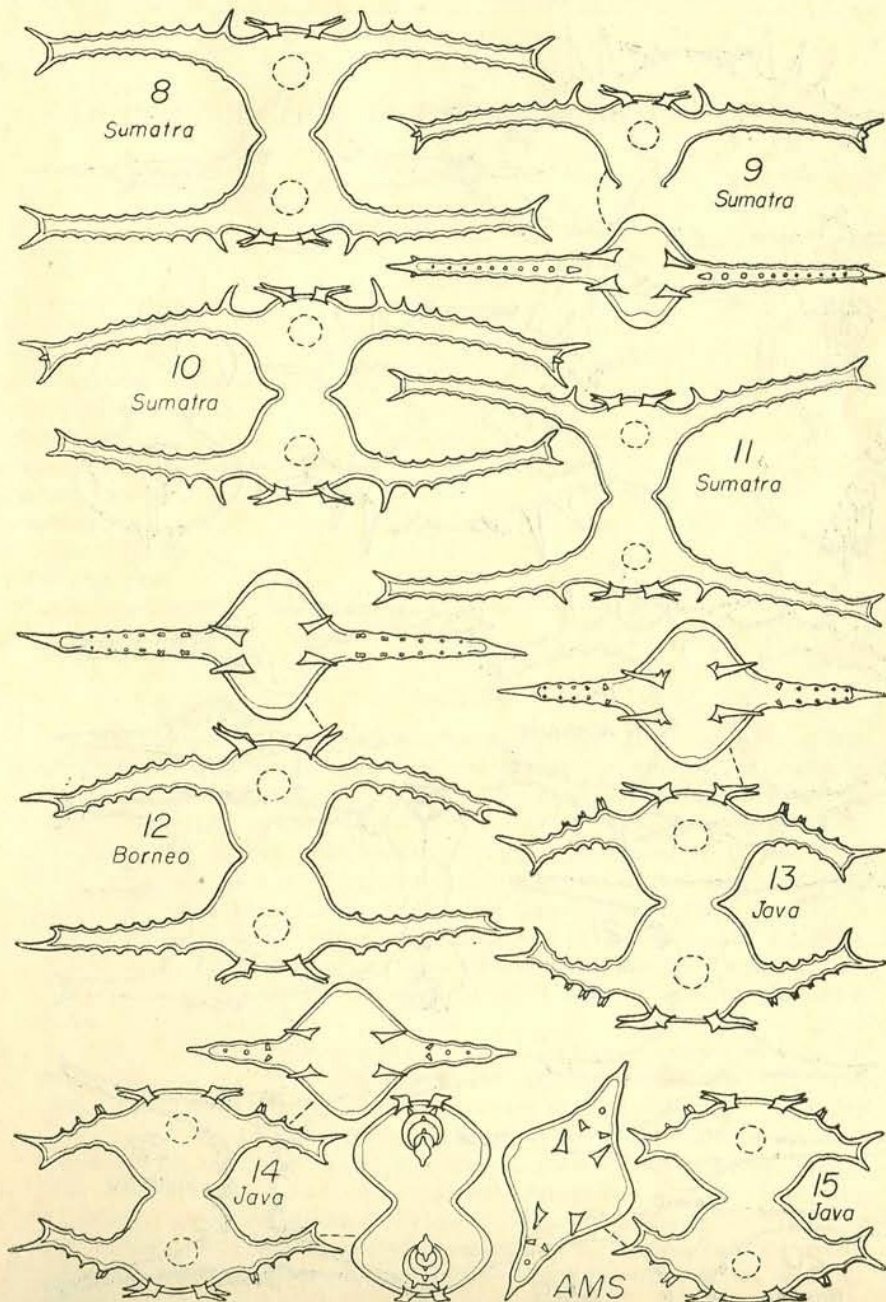
In the paper "Einige Desmidiaceen aus Peru" by Krieger & Scott (1957) the name *Euastrum latum* was given to a new species. Dr. EDWIN MESSIKOMMER has called attention to his prior use of this name (1942) for a different plant. The name of the Peruvian plant must therefore be changed to *Euastrum neolatum* Krieg. & Scott.

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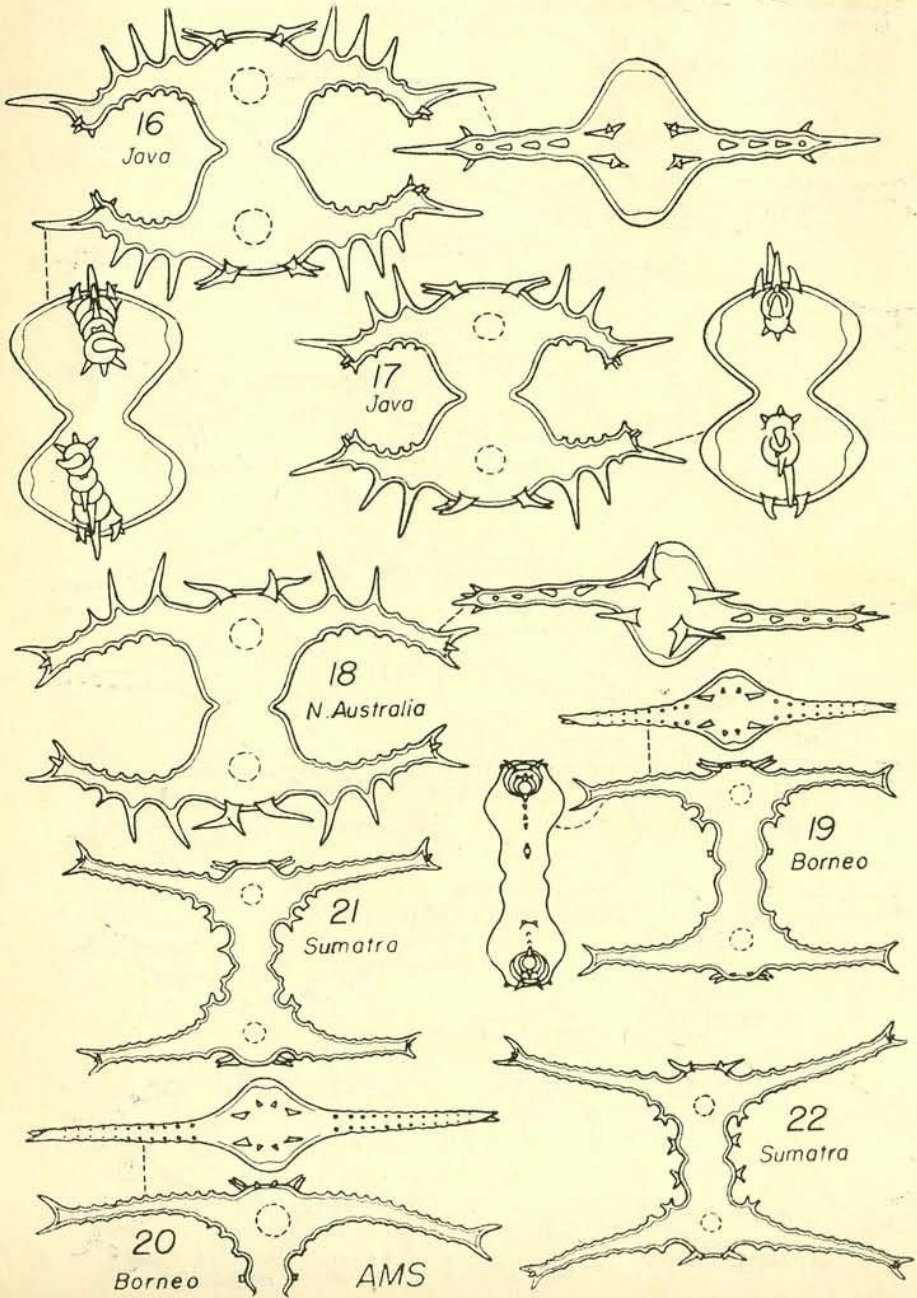
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Scott and Prescott: Indonesian freshwater algae III. FIG. 1—7 Explanation in text.



Scott and Prescott: Indonesian freshwater algae III. FIG. 8—15, Explanation in text.



Scott and Prescott: Indonesian freshwater algae III. FIG. 16—22. Explanation in text.