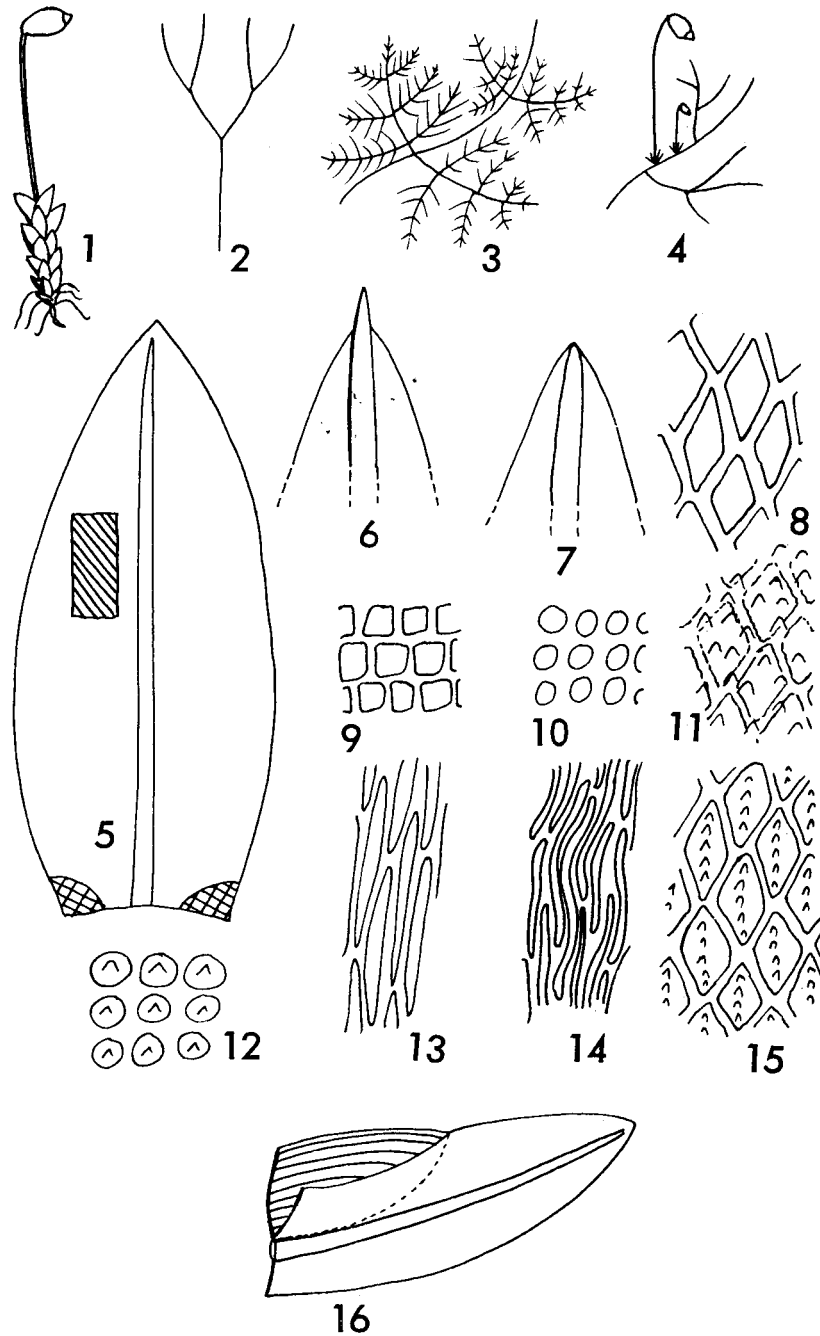


KEY TO THE GENERA OF MOSSES OF GUAM AND  
NORTHERN MICRONESIA



Figs. 1-16. Illustrations of special features of Musci (True Mosses).  
1. Acrocarpous moss. 2. Branching pattern of acrocarpous moss. 3. Pleurocarpous moss (e.g. *Thuidium*). 4. Pleurocarpous moss (*Rhacopilum*). 5. Idealized moss leaf, showing (above) region of typical leaf cells (hatched), and below, at corners, alar region. 6. Excurrent costa. 7. Percurrent costa. 8. Rhomboid cell type. 9. Quadrate cell type. 10. Round cell type. 11. Papillose surface. 12. Conic or rounded papillae. 13. Linear cell type. 14. Vermicular cell type. 15. Seriate-papillose surface. 16. Leaf of *Fissidens*.

Key from Miller, H.A. 1968. Bryophyta of Guam and Northern Micronesia. *Micronesica* 4: 49–83.

[Includes descriptions of genera and species, and keys to species.]

For more detailed illustrations of moss species (from Chuuk) see Miller & Smith, 1968, *Micronesica* 4: 213–237.

- 1. Plants erect (acrocarpous), dichotomously branched if at all ..... 2
- 1. Plants prostrate or pendant (pleurocarpous), pinnately branched ..... [18](#)

**Erect mosses:**

- 2( 1). Plants flattened with leaves in two rows, the upper half of the blade double toward the base ..... *Fissidens*
- 2( 1). Plants radially symmetrical with leaves in several rows, blade not doubled over ..... 3
- 3( 2). Plants white or pale glaucous green, leaves several cells thick with large empty, porose hyaline cells ..... 4
- 3( 2). Plants green yellowish to brownish or black, with leaves one cell thick in the blade ..... 6
- 4( 3). Leaves strap-shaped with an abruptly cuspidate tip, margin bordered only on basal lamina ..... *Octoblepharum*
- 4( 3). Leaves lanceolate, acute to acuminate, margin bordered above the basal lamina ..... 5
- 5( 4). Border several cells thick, costa often toothed on back near tip, costa with a median row of stereid cells in cross-section ..... *Leucophanes*
- 5( 4). Border one cell thick, costa smooth, costa lacking a median row of stereid cells in cross section ..... *Leucobryum*
- 6( 3). Leaves with a sharply defined group of enlarged, thin-walled rectangular hyaline cells on either side of the costa in the leaf base ..... 7
- 6( 3). Leaves with unmodified basal cells or, if enlarged, not in a sharply defined group and hyaline ..... 9
- 7( 6). Leaves unbordered or, if bordered, with the border submarginal or with marginal cells of a thickened border essentially isodiametric ..... *Calymperes*
- 7( 6). Leaves bordered with a marginal band of thick-walled elongate cells. .... 8
- 8( 7). Leaves broadly ovate with the border in the basal region more than 6 cells wide becoming narrower above ..... *Thyridium*
- 8( 7). Leaves linear to ligulate-lanceolate with a narrow border extending the length of the leaf ..... *Syrrhopodon*
- (9)(6). Cells of the leaf blade isodiametric ..... 10
- (9)(6). Cells of the leaf blade elongate, rhomboidal to linear ..... 15
- 10( 9). Leaves with a distinct border of fusiform thick-walled cells ..... 13
- 10( 9). Leaves unbordered ..... 12
- 11(10). Leaves crisped, confluence of the borders forming an apiculus, plants pale yellow-green ..... *Distichophyllum*
- 11(10). Leaves plane, costa penetrating the apiculus if present, plants green to dark green ..... *Mnium*
- 12(10). Closely spaced leafy branches arising from a leafless prostrate stem, mostly epiphytic, rarely over rock ..... *Macromitrium*
- 12(10). Plants separate, dichotomously branched if at all, mostly on soil or on damp rock ..... 11

13(12). Leaf apex mucronate or with an abruptly constricted apiculus .....	<i>Barbula</i>
13(12). Leaf apex rounded above or broadly pointed .....	14
14(13). Leaves narrowly lingulate, margin crenulate, convex lamina cells .....	<i>Weisiopsis</i>
14(13). Leaves oblong-elliptic to ovate, margin denticulate above, cells lightly papillose .....	<i>Hyophila</i>
15(9). Cells rectangular, papillose by projecting ends of the cells .....	<i>Philonotis</i>
15(9). Cells rhomboid, smooth .....	16
16(15). Leaves ecostate or with costa short and double .....	<i>Hookeria</i>
16(15). Leaves with a single long costa .....	17
17(16). Leaves contorted when dry, bordered or with cells somewhat elongate toward margins, blade cells rhomboidal to 65 µm long .....	<i>Bryum</i>
17(16). Leaves appressed when dry, unbordered, blade cells narrowly rhomboidal 70-90 µm long .....	<i>Brachymenium</i>
<b>Prostrate mosses:</b>	
18(1). Costa single .....	19
18(1). Costa double, usually short, or none .....	27
19(18). Leaves smooth .....	20
19(18). Leaves papillose .....	23
20(19). Leaves strongly dimorphous, costa long excurrent .....	<i>Rhacopilum</i>
20(19). Leaves not or scarcely dimorphous, costa shorter than the blade .....	21
21(20). Leaves bordered with a band of elongate cells, median leaf cells isodiametric, hexagonal .....	<i>Distichophyllum</i>
21(20). Leaves unbordered, median leaf cells rhomboid to linear .....	22
22(21). Plants fine, wiry, margins strongly serrate, cells rhomboidal, leaf base normal .....	<i>Fabronia</i>
22(21). Plants robust, margins serrulate, cells linear, leaf base auri- culate .....	<i>Calyptothecium</i>
23(19). Stem leaves ± broadly triangular, cells isodiametric .....	24
23(19). Stem leaves lanceolate, cells oblong to linear .....	26
24(23). Plants irregularly pinnate, paraphyllia absent from stems .....	<i>Claopodium</i>
24(23). Plants regularly bi-tri-pinnate, filiform paraphyllia present on stems .....	25
25(24). Plants delicate, wiry, bipinnately branched, calyptra campanulate, seta rough, stem leaves to 0.7 mm long .....	<i>Pelekium</i>
25(24). Plants medium to large with ascending branches, calyptra cucullate, seta smooth, stem leaves 1.0+mm long .....	<i>Thuidium</i>
26(23). Leaf cells pluripapillate with papillae over both walls and lumen .....	<i>Papillaria</i>
26(23). Leaf cells seriate-papillate with papillae in a row over the lumen .....	<i>Floribundaria</i>
27(18). Robust, flattened, pendant pale green plants with broadly pointed undulate leaves .....	<i>Neckeropsis</i>
27(18). Smaller, terete to somewhat complanate plants attached to the substrate .....	28

28(27). Alar cells differentiated, often much inflated and pigmented.....	29
28(27). Alar cells scarcely distinct, sometimes a single cell at the decurrent angle may be somewhat inflated .....	33
29(28). Leaf cells smooth .....	32
29(28). Leaf cells papillose by projecting ends of cells or seriate-papillose .....	30
30(29). Cells seriate-papillose .....	<i>Taxithelium</i>
30(29). Cells papillose by projecting ends of cells .....	31
31(30) With clusters of brood-filaments at tips, alar cells quadrate, 10 $\mu$ m, numerous, yellowish .....	<i>Clastobryella</i>
31(30). Branches normal, alar cells inflated, to 20 $\mu$ m or more, 2–4 at base, hyaline or colored .....	<i>Meiothecium</i>
32(29). Leaves curved, 3-4 inflated alar cells .....	<i>Sematophyllum</i>
32(29). Leaves straight, numerous quadrate alar cells .....	<i>Entodon</i>
33(28). Leaf cells papillose by projecting ends of cells .....	<i>Chaetomitrium</i>
33(28). Leaf cells smooth.....	34
34(33). Plants unbranched or nearly so, stems with leaves nearly 1 cm wide .....	<i>Hookeria</i>
34(33). Plants frequently branched, stems with leaves 1.0-3.5 mm wide .....	35
35(34). Areolation lax, cells 15-18 $\mu$ m wide .....	<i>Vesicularia</i>
35(34). Areolation firm, cells 3-7 $\mu$ m wide .....	31
36(35). Leaves asymmetrical, often curved .....	<i>Ectropothecium</i>
36(35). Leaves symmetrical. usually straight .....	<i>Isopterygium</i>