1. ***Hylocomiastrum***Fleisch. *ex* Broth. xing ta xian shu

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Plants medium-sized to large, dull or sometimes slightly glossy, green, yellowish green to brownish green, loose weft. *Main stems* prostrate; in cross section a small central strand present; cortical cells thin-walled, parenchyma; outer sterome cells small, thick-walled; secondary stems usually erect-spreading, irregularly or regularly 1–2-pinnately branched; paraphyllia dense on stems and branches, sometimes on the base of leaf and costae, often branched, yellowish brown at base, consisting of multiseriate cells, usually biseriate cells above, cell ends often projecting outward from the margins as spines; pseudoparaphyllia similar to paraphyllia, but larger, or lanceolate with toothed margins; rhizoids occasionally on tip of attenuate branches. *Stem leaves* and branch leaves somewhat differentiated; stem leaves remotely located, erect-spreading or spreading, broadly rounded ovate, ovate-triangular, usually acuminate above, but proximal leaves often rounded apiculate, acute or abruptly short-acuminate, not or slightly decurrent, somewhat concave, strongly plicate; basal margins reflexed, rarely plane, spinulose-serrate above, serrulate to serrate below, proximal leaves sometimes serrulate to nearly entire throughout; costae strong, single, double or occasionally triple, reaching 1/3 to 3/4 the leaf length, sometimes absent or short and double in proximal leaves, rarely ending in a sharp spine; median cells narrowly oblong or vermiform, approximately 6–12:1, smooth, somewhat thick-walled; basal cells becoming wider, orange yellow, thick-walled, pitted; alar cells not differentiated; branch leaves spreading, broadly rounded ovate or ovate-lanceolate, acute to acuminate, sometimes twisted at tips, concave, plicate; margins serrate above, serrulate below; costae single, up to 1/2–3/4 the leaf length, sometimes forked near ends. *Dioicous*. *Perichaetia* on main stems. *Setae* elongate, yellow or reddish, smooth, twisted below; capsules inclined to horizontal, asymmetric, ovoid, lacking a distinct neck, brown or reddish brown, not plicate or constricted below the mouth; exothecial cells isodiametric or oblong, somewhat thick-walled; stomata superficial at base of capsules; annuli not differentiated; opercula conic-apiculate; peristome double; exostome teeth yellow, lanceolate, often slightly bordered; outer surface irregularly cross-striate, finely papillose above; endostome segments lanceolate, as high as the teeth, light yellowish, papillose, nearly smooth below, trabeculate; basal membrane as high as 1/2 the length of endostome segments, perforated along median line; cilia 1–3, nodulose. *Calyptrae* cucullate, smooth, naked. *Spores* globose, 11–20 µm in diameter, finely papillose or nearly smooth.