## 92. TIMONIUS Candolle, Prodr. 4: 461. 1830, nom. cons.

海茜树属 hai qian shu shu

Chen Tao (陈涛); Charlotte M. Taylor

Trees or shrubs, dioecious [or sometimes polygamo-dioecious], unarmed, terrestrial [or sometimes epiphytic]. Raphides absent. Leaves opposite or verticillate, usually with domatia, notably leathery [to papery or succulent]; tertiary venation finely lineolate [or sometimes not visible]; stipules caducous, interpetiolar [or calyptrate], triangular. Inflorescences axillary, cymose with axes dichotomous to scorpioid, few to several flowered with pistillate usually fewer flowered than staminate, pedunculate, bracteate or bracts reduced; bracteoles sometimes fused in pairs. Flowers sessile, unisexual. Calyx limb cupular, truncate to 4- or 5-lobed. Corolla white to pale yellow, funnelform or tubular-funnelform with pistillate frequently shorter and broader in diam. than staminate, outside densely strigose to sericeous, inside glabrous, leathery; lobes 4(–10), thinly imbricate in bud (i.e., "subimbricate" of Darwin 1993, with margins thinly overlapping; see comment below). Stamens 4(–10), inserted in corolla throat, exserted; filaments short; anthers dorsifixed, at base 2-lobed. Ovary many celled, ovules 1 in each cell, pendulous from apical placentas; disk hirsute; style 4–12-parted with segments linear, often unequal; stigmas 4–12 (i.e., 1 on each style arm), papillose, included or exserted. Fruit red or black, drupaceous, thinly fleshy, ovoid, subglobose, or oblate (i.e., depressed globose), often 4- or 5-ridged when dry, with calyx limb persistent; pyrenes several to numerous [to 350 or more], 1-celled with 1 seed, narrowly oblong to cylindrical, bony; seeds cylindrical, straight or curved; testa membranous; endosperm scanty or absent; embryo straight or curved; cotyledons minute, flattened; radicle elongate, terete, ascending.

About 150-180 species: tropical SE Asia and the Pacific islands; one species in China.

Darwin (Allertonia 7(1): 1–39. 1993) noted that although the corolla lobes have been commonly described as valvate in *Timonius*, in fact, they are "subimbricate" with the margins only thinly overlapping; this arrangement is here called "thinly imbricate." A notable characteristic of *Timonius* within the Rubiaceae is the multiplication of ovules, or often entire files of ovules, as well as the number of cells in the ovary, from the 2 cells that are typical of most Rubiaceae, to far past the 5–9 cells found in *Guettarda*. Darwin (loc. cit.; Syst. Bot. Monogr. 42: 1–86. 1994) has monographed part but far from all of this large genus.

## **1. Timonius arboreus** Elmer, Leafl. Philipp. Bot. 1: 72. 1906 ["arborea"].

## 海茜树 hai qian shu

Trees 5-12 m tall: branches angled or flattened, rather stout, glabrous or glabrescent, often markedly sylleptic from nodes below leaves with markedly elongated lowermost internode, with scars of petioles often enlarged. Leaves opposite or usually whorls of 3; petiole stout, 1-5 mm, glabrous; blade drying stiffly papery, elliptic, elliptic-oblong, or broadly elliptic, 8.4–17 × 3–7.5 cm. adaxially glabrous, abaxially moderately to sparsely strigillose, base cuneate to acute and often tapered, apex acuminate; secondary veins 5-7 pairs, usually with densely pilosulous domatia; stipules caducous often leaving a ring of persistent trichomes 0.5-1 mm, triangular to lanceolate, 5-7 mm, abaxially moderately strigose, adaxially densely sericeous, acute to acuminate. Inflorescences strigose to glabrous, staminate 3–7-flowered, pistillate 1-flowered; peduncles 0.5–3 cm; bracts lanceolate to triangular, 0.5–2 mm, usually fused in pairs. Flowers subtended at immediate base by 2 to several persistent bracteoles 0.5–1 mm, these sometimes shortly fused in pairs. Calyx sparsely strigillose to glabrous; ovary portion subglobose, 2.5-3.5 mm in diam.: limb tubular, 1-2 mm, truncate or undulate to 5- or 6-denticulate. Corolla outside densely velutinous-strigillose to sericeous; tube 4-7 mm, glabrous inside; lobes 6-8, narrowly triangular, 4-7 mm, acute. Drupes subglobose to oblate, 8–10 × 10–14 mm, glabrescent, color not noted; pyrenes 50 or more, subcylindrical,  $6-7 \times 2-2.5$  mm. Fl. Apr. Nov, fr. Apr-Jun.

Near sea level to 400 m. Taiwan [Philippines].

The pubescence of the lower leaf surface is nearly colorless and

arranged along the higher order veins; thus, it is often difficult to see, even with good magnification, and has been overlooked by some authors.