OLEANDRACEAE
条蕨科 tiao jue ke

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Plants terrestrial, epilithic, or epiphytic. Rhizome long, creeping, erect, or scandent; scales blackish brown, thick, spreading or pressed, imbricate, peltate at base, margin often long ciliate. Fronds distant or clustered; stipe articulate to raised phyllopodia; lamina simple, entire, lanceolate to linear-lanceolate, herbaceous, papery, or leathery, margin cartilaginous, glabrous or pubescent; costa prominent, raised adaxially, often with small scales on abaxial surface; veins simple or forked, free. Sori in a single often irregular row on either side of costa; indusia persistent, red-brown, reniform or orbicular-reniform, membranous or papery. Spores monolete, with broad, winglike, echinate folds, cristate or echinate to erose.

One genus and 15–20 species: pantropical, mainly from tropical Asia and the Pacific islands, a few in Africa and South America; five species in China.


条蕨属 tiao jue shu

*Neuronia* D. Don.

Morphological characters and geographic distribution are the same as those of the family.

1a. Rhizome with stiff, erect or suberect lateral branches, bearing spreading whorls of 5–10 fronds, forming thickets ............................................................................................................................................... 1. *O. neriiformis*

1b. Rhizome creeping; fronds erect, scattered or in small clusters of 3–5.

2a. Rhizome not entirely covered with scales; scales with recurved apex; stipes dark brown ........................................ 2. *O. wallichii*

2b. Rhizome entirely covered with overlapping scales; stipes stramineous.

3a. Rhizome scales spreading, narrowly triangular with a relatively wide apex, brown, central part of acumen not thickened; roots branching and with root hairs along their entire length; lamina glabrous on adaxial surface and margin ......................................................................................................................... 3. *O. undulata*

3b. Rhizome scales appressed to spreading, narrowly ovate-lanceolate with long narrow acumen with thickened central part; roots usually with glabrous, unbranched part ("rhizophore"); lamina hairy or glabrous.

4a. Phyllopodia very short, 1–2(–5) mm, mostly immersed in scales ................................................................. 4. *O. musifolia*

4b. Phyllopodia 2–6 cm ........................................................................................................................................... 5. *O. cumingii*

1. *Oleandra neriiformis* Cavanilles, Anales Hist. Nat. 2: 115. 1799 ["neriformis"]

轮叶条蕨 lun ye tiao jue

*Aspidium pistillare* Swartz; *O. pistillaris* (Swartz) C. Christensen.

Rhizome very long, with creeping part and stiff, erect or suberect, scandent branches forming thickets, growth monopodial after forming fronds, 5–7 mm in diam., white waxy under scales; roots very long, stiff, borne on all sides of creeping parts of rhizome; scales strongly appressed, narrowly triangular, 6–7 × ca. 1 mm, base subacute, margin ciliate but often quickly eroding, leaving entire scales on older parts of rhizome, apex acuminate. Fronds on erect parts in horizontal or ascending whorls; stipes and phyllopodia 0.3–2.5 cm, stramineous, phyllopodia ca. 2 mm; lamina linear-lanceolate, 10–40 × 1.5–3.5 cm, thinly papery, both surfaces glabrous, base cuneate to rounded, margin not undulate and glabrous, apex acuminate; costa sparsely scaly abaxially, glabrous adaxially. Sori close to costa; indusia orbicular-reniform, glabrous or sparsely pubescent.

Rocky slopes, forests; ca. 1600 m. Xizang [Bhutan, Cambodia, India, Indonesia, Malaysia, Myanmar, Nepal, Philippines, Papua New Guinea, Thailand; Pacific islands].


高山条蕨 gao shan tiao jue

*Aspidium wallichii* Hooker, Exot. Fl. 1: t. 5. 1823; *Neuronia asplenioideas* D. Don, nom. illeg. superfl.

Plants epilithic or epiphytic; rhizome long creeping, freely branching, branches often opposite, 3–4 mm in diam., white

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waxy under scales; roots restricted to ventral side; scales 3–4 × ca. 1 mm, dark brown to blackish at attachment, contracted into a brown, often recurved acumen, margin ciliate, apex long and narrow. Fronds scattered or in small tufts; phyllopodia 1–2 mm, hardly emerging from rhizome scales; stipe dark brown, 1.5–3(–8) cm; lamina greenish brown when dry, lanceolate, 20–40 × 2–5 cm, herbaceous, both surfaces hairy, more densely so abaxially and on veins, base cuneate to rounded, margin not undulate and densely ciliate, apex apiculate-caudate; costa raised on both sides, abaxially with small, brown, lanceolate scales, adaxially narrowly grooved; veins simple or forked at base. Sori very close to costa; indusia red-brown, orbicular-reniform, glabrous or hairy on surface, margin, or both margin and surface.

Forests; (800–)1700–2700 m. Guangxi, Sichuan, Taiwan, Xizang, Yunnan [Bhutan, N India, N Myanmar, Nepal, Thailand, Vietnam].


波边条蕨  bo bian tiao jue


Plants terrestrial or epilithic; rhizome long creeping, growth monopodial, 4–5 mm in diam., not white waxy; roots restricted to ventral side, branched and hairy throughout their length; scales dark brown at middle, apex and margin reddish brown, spreading, narrowly ovate-lanceolate, ca. 6 × 1 mm, base rounded, margin ciliate, apex acuminate. Fronds erect, scattered or in tufts; stipe and phyllopodia together 10–15(–20) cm, stramineous, phyllopodia to 2–12 cm; lamina brown when dry, lanceolate or broadly lanceolate, 15–25 × 2–4.5 cm, thickly papery, abaxially with long hairs, adaxially glabrous, base cuneate, rarely more gradually narrowed, to broadly cuneate or rounded, apex acuminate, margin slightly undulate and glabrous; costa raised on both sides, narrowly grooved adaxially; veins simple or forked at base, rarely forked medially. Sori to 2–5 mm from costa; indusia pubescent.

Sunny slopes; below 1000 m. Yunnan [India, Laos, Myanmar, Thailand, Vietnam].


光叶条蕨  guang ye tiao jue

*Apidium musifolium* Blume, Enum. Pl. Javae 2: 141. 1828; *Oleandra hainanensis* Ching; *O. whangii* Ching.

Plants terrestrial or epilithic; rhizome stiff, long creeping, growth sympodial, continuing mostly from lateral branches below each tuft of fronds, 4–5 mm in diam., white waxy under scales; roots long, stiff, restricted to ventral side, usually with unbranched glabrous part (rhizophore); scales strongly appressed, dark brown at middle, pale brown at apex and margin, narrowly ovate-lanceolate, 3–5 × 0.5–1.5 mm, base rounded or subacute, margin ciliate, apex long acuminate. Fronds erect, mostly in tufts of 2–4; phyllopodia very short, 1–2 mm, sometimes up to 5 mm, immersed in scales; stipe stramineous, 1–2.5 cm; lamina green or brown when dry, linear-lanceolate, 12–43 × 1.8–3.5 cm, herbaceous, abaxially more or less hairy, adaxially pubescent or glabrous, base cuneate to rounded, margin slightly wavy, not undulate, and glabrous, apex long acuminate or caudate; costa raised on both sides, sparsely scalarily abaxially, slightly grooved adaxially; veins simple or forked at base, rarely forked medially. Sori 2–4 mm from costa; indusia brown, margin pale brown, orbicular-reniform, glabrous.

Dense forests, often on rocky cliffs; 300–1800 m. Guangxi, Hainan, Yunnan [Indonesia, Malaysia, Sri Lanka, Thailand, Vietnam].

5. **Oleandra cumingii** J. Smith in Hooker, J. Bot. 3: 413. 1841.

华南条蕨  hua nan tiao jue

*Oleandra canoniensis* Ching; *O. chinensis* Hance; *O. guangxiensis* S. L. Mo & Y. C. Zhong; *O. intermedia* Ching; *O. yunnanensis* Ching.

Plants terrestrial or epilithic; rhizome creeping, monopodial, 3–4 mm in diam., sometimes white waxy; roots restricted to ventral side, mostly with short unbranched glabrous part (“rhizophore”); scales appressed, dark brown in basal part, lighter toward apex, narrowly triangular, 4–7 × ca. 1 mm, margin ciliate. Fronds erect, scattered or in tufts; stipe and phyllopodia together 2.5–7 cm, stramineous, phyllopodia 2–6 cm; lamina greenish brown when dry, lanceolate, to 34 × 2–3.5 cm, herbaceous, both surfaces and margin glabrous to densely long hairy, abaxially more often pubescent, more densely so on costa and veins, hairs to 2 mm, lamina attenuate to both ends, base cuneate, margin not undulate, apex shortly acuminate; costa slightly raised on both sides, narrowly grooved adaxially; veins simple or forked at base, rarely forked at middle. Sori very close to costa or up to 6 mm distant, in an irregular single line; indusia dark brown, reniform or orbicular-reniform, glabrous or hairy.

Rocky cliffs. Guangdong, Hainan, Yunnan [Indonesia, Laos, Malaysia, Philippines, Thailand].

Plants of *Oleandra cumingii* from Hainan differ in a number of characters: the lamina is wider, to 4.5 cm, less gradually narrowed at base, and the plants are more consistently glabrous than typical plants.