

• 中文名稱：海金沙

• 英文名稱：Japanese Climbing Fern

• 學名：  
*Lygodium japonicum* (Thunb.) Sweet  
*Lygodium microstachyum* Desv.

• 科名：海金沙科(Schizaeaceae)海金沙屬(Lygodium)

鼎炊藤、玳瑁髭、鬚鬚藥、鐵絲草、鐵線藤、鐵線草、羅網藤、吐絲草、鳳尾草、蛤蟆藤、珍中笔仔、珍中毛、藤中毛仔、苦藤(台灣)、金沙藤、大轉藤灰、竹園菱、斑鳩巢、Kanawaru(泰雅)、Sasuru(排灣)。

• 別名：

- **The "Iron Wire" Series:**

- **Iron Wire Grass/Vine (鐵絲草、鐵線藤、鐵線草):** These names refer to the extremely tough, thin, and wiry **rachis** (the "stem") that allows the fern to climb other plants.

- **The "Thread & Silk" Series:**

- **Spitting Silk Grass (吐絲草):** Refers to the fine, thread-like appearance of its climbing structure.
- **Golden Sand Vine (金沙藤):** A reference to its famous medicinal spores, which look like fine golden sand.

- **The "Net & Tangle" Series:**

- **Net-snare Vine (羅網藤):** Describes how the fern tangles itself around other vegetation like a fishing net.
- **Toad Vine (蛤蟆藤):** A folk name, possibly relating to its habitat or medicinal use for skin conditions.

- **Regional Variations:**

- **Bitter Vine (苦藤 - Taiwan):** A common local name in Taiwan.
- **Phoenix Tail Grass (鳳尾草):** Often used for ferns with elegant, tapering fronds.

• 原產地：日本、我國大陸長江以南至熱帶亞洲。

- **East Asia (東亞):** Japan (日本).
- **Mainland China (中國大陸):** Primarily regions **south of the Yangtze River** (長江以南).
- **Tropical Asia (熱帶亞洲):** Extending through Southeast Asia and other tropical regions of the continent.

臺灣全境海拔 500 公尺以下林緣、山麓、路旁。

• 分佈：

- **Location:** Found throughout the **entire territory of Taiwan** (臺灣全境).
- **Altitude:** Primarily occurring at elevations **below 500 meters** (海拔 500 公尺以下).
- **Micro-habitat:** Commonly seen along **forest edges** (林緣), at the **foot of mountains/hills** (山麓), and by **roadsides** (路旁).

• 用途：

1. 園藝觀賞用：盆栽和攀附庭園觀賞。2. 插花用花材。3. 食用：嫩莖可食，全草可製涼茶，亦可為野外求生植物。4. 藥用：性味：全草及孢子：甘、寒清。效用：全草：清熱解毒，通淋利水，消腫。主治熱淋尿熱，尿道結石、感染，血尿，腎炎水腫，溼熱黃疸，咽喉腫痛，飛蛇、燙傷，丹毒，感冒，牙痛，肝炎，脾濕脹滿，帶狀疱疹。
  - **Gardening:** Used for **potted plants** (盆栽) or as a **climbing ornamental** (攀附觀賞) in gardens.
  - **Floral Art:** Its delicate, wiry fronds are popular **foliage material for flower arrangements** (插花花材).
2. **Edible & Survival (食用與求生)**
  - **Wild Vegetable:** The **tender stems/fiddleheads** (嫩莖) are edible.
  - **Herbal Tea:** The entire plant can be brewed into **herbal "cooling" tea** (涼茶).
  - **Survival:** It serves as a reliable **wilderness survival plant** (野外求生植物).
3. **Medicinal (藥用)**
  - **Properties (性味):** Both the **entire plant** (全草) and the **spores** (孢子) are considered **sweet and cold/clearing** (甘、寒清) in traditional Chinese medicine.
  - **Primary Functions (效用):**
    - **Clears heat and detoxifies** (清熱解毒).
    - **Promotes urination** (通淋利水—specifically helping with difficult/painful urination).
    - **Reduces swelling** (消腫).
  - **Target Symptoms (主治):**

- **Urinary Issues:** Urinary tract infections (UTI), kidney stones (尿道結石), hematuria (血尿/blood in urine), and nephritis-related edema (腎炎水腫).
- **Internal Health:** Jaundice (黃疸), hepatitis (肝炎), and bloating due to "spleen dampness" (脾濕脹滿).
- **External & General:** Sore throat, common cold, toothache, burns (燙傷), and skin conditions like **shingles** (帶狀疱疹—locally called "Flying Snake" / 飛蛇) or **erysipelas** (丹毒).

根莖匍匐，長數公尺，細長，披柔細毛；莖細弱，乾草色，多分枝。

• 莖：

- **Rhizome (根莖 - Ground level/Underground):**
  - **Habit: Creeping** (匍匐—growing horizontally along or just under the soil surface).
  - **Length:** Can reach **several meters long** (長數公尺).
  - **Texture:** Slender and **covered with fine, soft hairs** (披柔細毛).
- **Stem (莖 - Climbing portion):**
  - **Appearance: Slender and weak** (細弱).
  - **Color: Straw-colored** (乾草色—a pale brownish-yellow).
  - **Structure: Highly branched** (多分枝).

葉疏生，纏繞狀；葉軸光滑，長可達數公尺，第一回羽枝極短，長 0.3~0.8 公分，被極短細毛；[休眠芽](#)被淺棕色毛；第二回羽枝長 3~8 公分，被軟毛，對生，一~三回羽狀；營養小羽片掌狀裂或三裂，裂片不規則淺齒緣，基部無關節；孢子葉小羽片短小，邊緣具多數深裂，裂片指狀。長孢子囊之部位，羽片有窄化之現象。

這段描述展示了 **海金沙** (*Lygodium japonicum*) 最神奇的生物學特徵：它的葉子其實是一條無限生長的「蔓藤」。在植物學中，海金沙的葉子被認為是世界上最長的葉子之一。

• 葉：

- **Arrangement (排列): Distant/Sparingly spaced** (葉疏生) along the rhizome; **twining/climbing** (纏繞狀).
- **Rachis (葉軸 - The "Vine"):**
  - **Texture:** Smooth (**glabrous**), reaching lengths of **several meters**.
  - **Primary Pinnae (第一回羽枝):** Extremely short (0.3–0.8 cm), covered with very

short fine hairs.

- **Dormant Bud (休眠芽):** Located at the tip of the primary pinnae, covered with **light-brown hairs**.

- **Secondary Pinnae (第二回羽枝):**

- 3–8 cm long, covered with soft hairs (**pubescent**).
- Arranged **oppositely** (對生).
- Structure is **1 to 3-pinnate** (一至三回羽狀).

- **Sterile Pinnules (營養小羽片 - Non-reproductive):**

- **Shape: Palmate** (掌狀裂) or **3-lobed** (三裂).
- **Margins:** Irregularly and shallowly **toothed/serrated** (不規則淺齒緣).
- **Attachment:** The base is **not articulate** (基部無關節).

- **Fertile Pinnules (孢子葉小羽片 - Reproductive):**

- Shorter and smaller than sterile ones.
- **Margins:** Deeply lobed with multiple **finger-like projections** (裂片指狀).
- **Special Feature:** The leaf tissue (lamina) tends to **narrow/contract** (窄化) in the areas where sori are produced.

- **花:**

孢子囊囊蓋鱗片狀，卵形。孢子囊兩列並排於小羽片上，具孢膜，每一孢膜內只有一個孢子囊。以孢子繁殖。

- **Indusium (孢子囊蓋):**

- **Shape: Scale-like** (鱗片狀) and **ovate** (卵形).

- **Arrangement (排列):**

- Sporangia are arranged in **two parallel rows** (兩列並排) on the fertile pinnules (small leaf segments).

- **果實:**

- **Structure (構造):**

- Equipped with a **false indusium** (孢膜—a protective flap of leaf tissue).
- **Unique Feature: Each indusium contains only a single sporangium** (每一孢膜內只有一個孢子囊).

- **Reproduction (繁殖):**

- Reproduces via **spores** (以孢子繁殖).

多年生攀援常綠草本蕨類，長 1~4 公尺；根莖細而匍匐，被細柔毛；莖細弱，呈乾草色，有白色微毛。葉軸可無限生長，休眠芽在羽軸頂端，游離脈，羽軸和脈上有毛，小羽片長，羽片基部無關節；葉為 1~2 回羽狀複葉，紙質，邊緣有鋸齒或不規則分裂；不育羽片三角形，小葉闊線形；孢子囊生於能育羽片的背面，在二回小葉的齒或裂片頂端成穗狀排列，孢子囊蓋鱗片狀，卵形。孢子為解熱及利尿劑，也能治水腫，膀胱結石。

- **A perennial, evergreen, climbing herbaceous fern** (多年生攀援常綠草本蕨類).
- Reaches lengths of **1 to 4 meters**.

- **Rhizome & Stem (根莖與莖):**

- The rhizome is **slender and creeping** (細而匍匐), covered with **fine soft hairs** (細柔毛).
- The climbing stem (rachis) is **slender/weak, straw-colored** (乾草色), and features **minute white hairs** (白色微毛).

- **Leaf & Rachis (葉與葉軸):**

- The **rachis has indeterminate growth** (葉軸可無限生長), meaning it can grow indefinitely like a vine.
- **Dormant buds** (休眠芽) are located at the tips of the pinna-stalks (羽軸頂端).
- **Venation:** Features **free veins** (游離脈); both the pinna-stalks and veins are hairy.
- **Structure: 1 to 2-pinnate compound leaves** (1~2 回羽狀複葉).
- **Texture: Paper-like** (紙質), with **serrated margins** (邊緣有鋸齒) or irregular lobes.
- **Differentiation:**

- **特性：**

- **Sterile pinnae** (不育羽片) are triangular with broad-linear leaflets.
- **Fertile pinnae** (能育羽片) bear the sporangia.

- **Reproduction (孢子/繁殖):**

- Sporangia are borne on the **underside of fertile pinnae**, arranged in **spike-like clusters** (穗狀排列) at the tips of the teeth or lobes of the secondary leaflets.
- The **indusium** (孢子囊蓋) is scale-like and ovate.

- **Medicinal Use (藥效):**

- The spores serve as an **antipyretic** (解熱/fever reducer) and **diuretic** (利尿劑).
- They are also used to treat **edema** (水腫) and **bladder stones** (膀胱結石).