

- 中文名稱：杉木
- 英文名稱：China Fir, Chinese Fir, Fir Ferr
- 學名： *Cunninghamialanceolata*(Lamb.) Hook.
- 科名：杉科(Taxodiaceae)杉屬(Cunninghamia)

杉木(通用名)，廣州杉，福州杉，廣葉杉，杉材『別錄』，椴、黏『爾雅』，沙木、檠木『本草綱目』，杉樹，沙樹，刺杉(江西)，正木、正杉(浙江)，泡杉，清心，無油杉，杉仔(臺灣)，沙木、沙樹(西南各省區)，木頭樹、刺杉(江西、安徽)，杉(經濟植物手冊)

• 別稱：

分類 (Category)	中文別稱 (Chinese Alias)	意義與由來 (Meaning & Origin)
國際通用名	杉木 (China Fir)	最正式的中文名，強調其作為「杉」類的代表性。
產地與貿易	廣州杉、福州杉	反映歷史上主要的木材集散地。**「福州杉」**在臺灣尤為出名，因早期大量由福建輸入。
形態與特徵	廣葉杉、刺杉、沙木	<b>廣葉杉</b> ：相對於松樹的針葉較寬； <b>刺杉</b> ：形容其葉尖銳利刺手。
木材品質	泡杉、無油杉、正木	<b>泡杉</b> ：形容質地較輕軟； <b>無油杉</b> ：相對於松木，其油脂含量較低，適合建築。
台灣俗稱	杉仔 (Siam-á)	台灣民間最親切、通俗的稱呼。
古籍記載	椴、黏、檠木	出自《爾雅》、《本草綱目》，顯示此樹種在華夏文明中利用歷史悠久。

• 原產地：

中國中南部；臺灣於早期移民時(約明鄭時期)引進，北部及中部山地廣泛種植。Native Origin (原產地):

- **Primary Source:** Central and Southern China.
- **Introduction to Taiwan:** Introduced to Taiwan by early immigrants (around the **Koxinga/Ming-Zheng period**). It has since been extensively planted in the mountainous regions of Northern and Central Taiwan.

• 分佈：

杉木為大陸長江以南各省最重要的造林樹種，臺灣引進栽培於全島 500~1800 公尺之山區。

Distribution (分佈):

- **In China:** It is the most critical **afforestation species** across all provinces south of the Yangtze

River.

- **In Taiwan:** Widely cultivated across the island in mountainous areas at altitudes ranging from 500 to 1,800 meters.

1.優美的觀賞樹種：樹形優美，事優良的觀賞樹種，杉木因生長快，伐期短，本島低海拔之人工林多屬之。朱熹詩云"門前杉徑深，屋后杉色奇"，可知杉木早就為觀賞及庇蔭之用。2.木材是加工、傢俱及建築的良材：杉木在台灣的木材市場上常稱為杉仔，材質優良，適合做建築、傢俱、門窗、農具、棺材、板材、橋樑、船舶及器具的製造。3.木材可提供造紙紙漿的主要原料。4.藥用：性味：心材及樹枝：辛、微溫。效用：幹材：止痛，散濕毒。治風濕，心腹脹痛；杉木炭：收斂止血。治外傷出血；杉脂：破結消腫。治尿路結石，疔瘡。

### Multi-purpose Uses: China Fir (杉木的用途)

#### 1. Ornamental and Shading (觀賞與庇蔭)

- **Landscape Beauty:** With its towering, straight trunk and elegant form, it is a premier **ornamental tree**.
- **Historical Significance:** Even the great philosopher **Zhu Xi** (Southern Song Dynasty) praised it in his poetry, noting its beauty and the deep shade it provided.
- **Rapid Growth:** Its fast growth and short rotation period (harvest cycle) make it the dominant species in Taiwan's **low-altitude artificial forests (plantations)**.

#### 2. Premier Construction & Furniture Timber (建築與傢俱良材)

In the Taiwanese timber market, it is affectionately called "**Siam-á**" (杉仔). Its wood is highly valued for its straight grain and durability:

- **Architecture:** Used for beams, pillars, bridges, and ship-building.
- **Daily Living:** Ideal for **furniture, doors, windows**, and traditional farm tools.
- **Specialty Uses:** Traditionally the preferred wood for **coffins** and high-quality planks due to its rot-resistant properties.

#### 3. Industrial Use (工業用途)

- **Paper Pulp:** The wood provides high-quality long fibers, serving as a primary raw material for the **paper-making industry**.

• 用途：

#### 4. Medicinal Properties (藥用價值)

- **Nature:** The heartwood and branches are acrid and slightly warm.
- **Efficacy:**
  - **Trunk Wood:** Used to relieve pain and dispel "damp-toxins." It treats **rheumatism** and abdominal bloating/pain.
  - **Charred Wood (Carbon):** Acts as an **astringent** to stop bleeding in external wounds.
  - **Resin (Cunninghamia Resin):** Used to resolve swelling and hardness. Historically used for **urinary tract stones** and boils.

常綠大喬木，高可達 60 公尺，徑亦常在數公尺以上；樹形端直，樹皮縱裂，成鱗片狀剝落，外皮棕褐色，內皮赤色，枝短，輪生，水平開展，綠色或淡棕色；根株常能生長多數萌葉。 **Trunk and Habit (莖與習性)**

• 莖：

- **Form:** A massive **evergreen coniferous tree**, reaching heights of up to **60 meters** with a trunk diameter (DBH) often exceeding several meters.
- **Structure:** The trunk is remarkably **straight and erect**.
- **Bark:** Dark brown outer bark with **prominent longitudinal fissures**, peeling off in **scales or long strips**. The inner bark is a distinct reddish color.
- **Branches:** Short and arranged in **whorls**, spreading horizontally.
- **Regeneration:** A unique feature is its ability to produce numerous **basal sprouts (coppice shoots)** from the root crown.

葉長 5~6 公分，寬 0.5~0.7 公分，螺旋狀生長而扭轉排列為 2 列狀，線形或線狀披針形，稍鐮形，先端銳尖，基部狹窄，葉緣有細鋸齒；上表面深綠色，下表面粉綠色，有闊氣孔帶 2 條。 **Foliage (葉)**

• 葉：

- **Shape:** Linear or linear-lanceolate, typically **falcate (sickle-shaped)**, 5 – 6 cm long.
- **Arrangement:** Spirally arranged but twisted at the base to appear **distichous (two-ranked/flat)**.
- **Details:** The apex is sharply pointed (**acuminate**), and the margins feature **fine serrations (minutely saw-toothed)**.

- **Stomata:** The upper surface is dark green, while the underside is glaucous (pale/powdery green) with **two broad stomatal bands**.

單性花，雌雄同株；雌花有短柄，圓柱狀長橢圓形，叢生於小枝頂端，基部有多數銳狀苞片，雄蕊螺旋狀著生，花藥 3 或 4 枚。花期 3~5 月。**Flowers (花)**

#### • 花：

- **Reproduction: Monoecious** (separate male and female flowers on the same tree).
- **Flowering Season:** March to May.
- **Male (Pollen) Cones:** Small, cylindrical-oblong, clustered at the tips of twigs. Stamens are spirally arranged with 3 or 4 anthers.
- **Female (Seed) Cones:** Feature a short stalk and are protected by numerous sharp bracts at the base.

果實為毬果，長 4~6 公分，直徑約 4~5 公分，卵狀球形或近於球形，有短柄，熟時常下垂；果鱗闊卵形，邊緣有細鋸齒，先端漸尖形，有長約 0.2 公分之尖突；每果鱗下有扁平種子三枚，種子卵狀長橢圓形，深褐色，有薄翅。**Fruit and Seeds (果實與種子)**

#### • 果實：

- **Fruit Type:** An ovoid-globose or sub-globose **woody cone (strobile)**, 4 – 6 cm long. They often hang downward when mature.
- **Cone Scales:** Broadly ovate with finely serrated edges and a sharp, 0.2 cm long **apical point (mucro)**.
- **Seeds:** Each scale covers **3 flattened, dark brown seeds**. The seeds are oval-oblong and equipped with **thin lateral wings** for wind dispersal.

#### • 特性：

常綠大喬木。葉長 2.5~4.5 公分，寬 0.3~0.4 公分，螺旋狀著生，基部扭曲成為二列，線形或線狀披針形，稍鐮形，邊緣有細鋸齒，上表面深綠色，下表面粉綠色，有闊氣孔帶兩條。花單性，雌雄同株；雄花序圓柱狀，基部具數枚覆瓦狀鱗片，每花具多數雄蕊，著生於鱗片狀藥隔之下緣；雌花序單生或 3~4 個簇生枝梢，球形或卵形，由覆瓦狀鱗片組成，每鱗片內具胚珠 3 枚。毬果卵圓形，長 3~5 公分，直徑約 3 公分；果鱗卵形，革質，銳尖，先端有一突尖，裏側基部著生具有薄翅的種子 3 枚；種子扁平圓形，灰褐色，略具有光澤。1.  
**General Habit (生長習性)**

- A massive **evergreen coniferous tree**. Its towering, straight trunk makes it a dominant feature in forest plantations.

## 2. Foliage Details (葉部特徵)

- **Structure:** Leaves are 2.5 – 4.5 cm long, **linear or linear-lanceolate**, and slightly **falcate (sickle-shaped)**.
- **Arrangement:** Although they grow **spirally** around the twig, they **twist at the base** to align into **two flat ranks (distichous)**.
- **Appearance:** The leaf margins have **fine serrations** (very sharp to the touch). The top is deep green, while the underside features **two broad, pale-green stomatal bands**.

## 3. Reproductive Organs (花部特徵)

- **Monoecious:** Male and female flowers reside on the same tree.
- **Male Inflorescence:** Cylindrical clusters with imbricate (overlapping) scales at the base.
- **Female Inflorescence:** Global or ovoid, appearing solitary or in small clusters of 3 – 4 at the branch tips.

## 4. Cone and Seed Morphology (球果與種子)

- **The Cone:** An ovoid-globose **woody cone**, roughly 3 – 5 cm long.
- **Cone Scales:** **Leathery (coriaceous)** and ovate, ending in a sharp, pointed tip.
- **The Seed:** Each scale hides **3 seeds**. The seeds are flattened, circular to oval, grayish-brown, slightly lustrous, and equipped with **thin lateral wings** for wind dispersal.