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European International Journal of Pedagogics

TYPE Original Research
PAGE NO. 251-256
DOI 10.55640/eijp-05-05-56



# The Teaching Methodology of The Medicimal Plants of Cupressaceae Family

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**OPEN ACCESS**

SUBMITED 31 March 2025
ACCEPTED 29 April 2025
PUBLISHED 31 May 2025
VOLUME Vol.05 Issue05 2025



**Abstract:** This paper involves information on the botanical characteristics, genera, and species of medicinal plants belonging to the cypress family. Materials on the use of some methods related to the methodology of teaching this topic are presented. The article contains materials on botany and serves as a useful source for deepening knowledge of plant systematics.

**Keywords:** Cupressaceae, conifers, seed plants, trees, shrubs, lateral branches, method, Venn-diagram, Juniper.

**Introduction:** The Cupressaceae are found in the fossil record since the Jurassic; specifically, since 197-190 million years ago, represented by the extinct species Austrohamia minuta (Escapa et al. 2008 in Rothwell et al. 2012). The family arose via a whole-genome-duplication (polyploidy) event that separated it, in a clade that included the progenitor of both the Cupressaceae and the Taxaceae, from the remaining

conifer lineages (a similar event gave rise to the Pinaceae clade, and to the Welwitschiaceae) (Li et al. 2015) [2].

The family was formerly divided between Cupressaceae sensu strictu (genera with leaves opposite in four ranks or whorled) and Taxodiaceae (leaves mostly alternate). Foliage characters, however, are seldom used as grounds for discriminating between families. All genera treated here have seed cones in which the bract-scale complexes are fused for most of their common length, the 1-20 ovules are erect (but may invert with maturity), and the paired seed wings, if present, are derived from the seed coat (Eckenwalder 1976, Watson and Eckenwalder 1993). Study of plastid (rbcL) DNA sequences has further confirmed the close relationship between the Cupressaceae s.str. and the genera formerly assigned to the Taxodiaceae. As shown in the phylogenetic tree at right, the Cupressaceae sensu strictu form a monophyletic clade, with the various Taxodiaceae genera forming basal branches [3].

**Theoretical bases and discussion.**

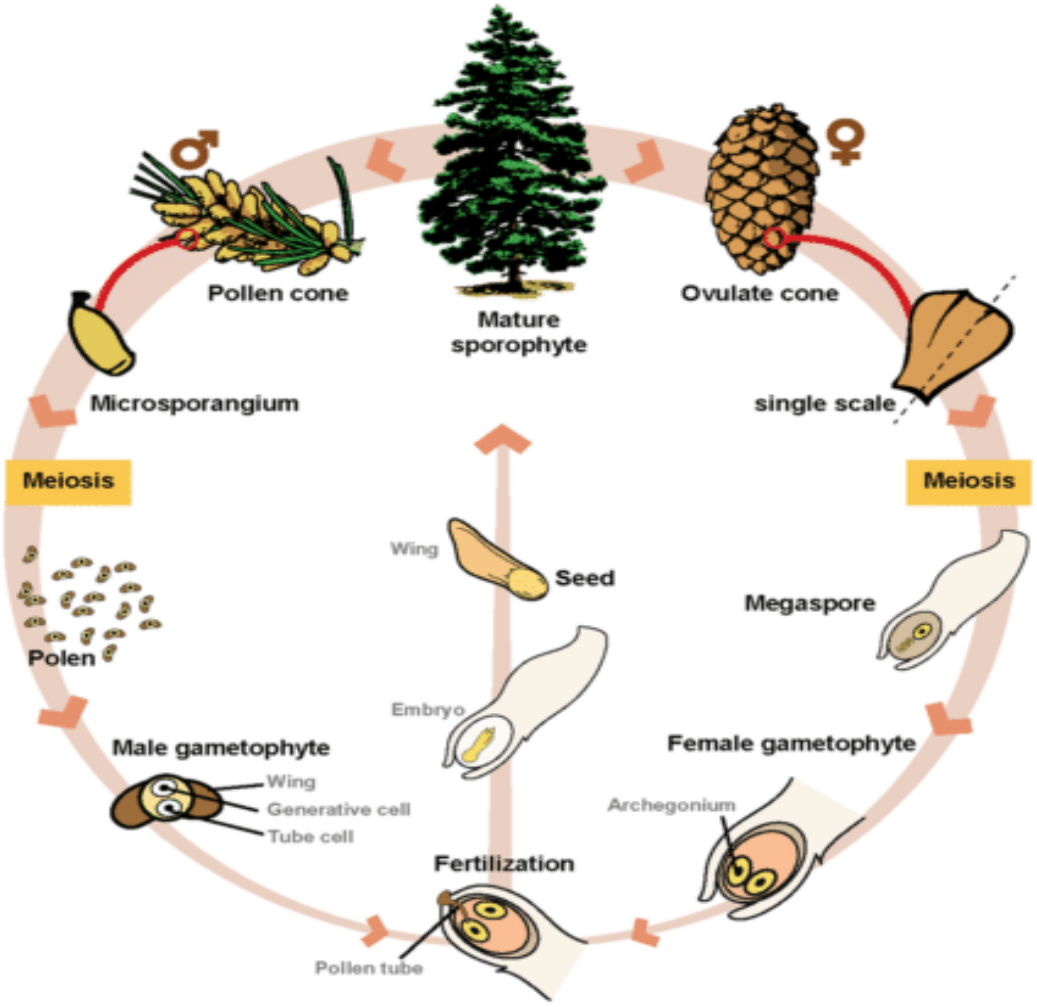
**Description.** Trees or shrubs, generally resinous and aromatic, monoecious (usually dioecious in Juniperus). Bark fibrous and furrowed (smooth or exfoliating in plates in some Hesperocyparis and Juniperus species). Lateral branches well developed, similar to leading shoots, twigs terete, angled, or flattened dorsiventrally (with structurally distinct lower and upper surfaces in Thuja, Calocedrus, Thujopsis, Fokienia, Libocedrus, P apuacedrus, and to a lesser extent in some other genera), densely clothed by scalelike leaves or by decurrent leaf bases; longest internodes to 1 cm; buds undifferentiated and inconspicuous (except in Sequoia, Metasequoia,
Cunninghamia and Juniperus sects. Juniperus and Caryo cedrus).

Roots fibrous to woody (bearing aboveground "knees" in Taxodium). Leaves simple, usually persisting 3-5(-12) years and shed with lateral shoots (cladoptosic) (shed annually in Taxodium, Glyptostrobus and Metasequoia; leaves with an abscision zone and shed individually in Juniperus Sects. Juniperus and Caryocedrus),
alternate and spirally arranged but sometimes twisted so as to appear 2-ranked, or opposite in 4 ranks, or whorled, deltate-scalelike to linear, decurrent, sessile or petiolate; adult leaves appressed or spreading, often differing between lateral and leading shoots (twigs heterophyllous), sometimes strongly dimorphic on each twig (in Thuja, Thujopsis, Libocedrus, Papuacedrus and Calocedrus, and weakly so in some other genera) with lateral scale-leaf pairs conspicuously keeled; juvenile leaves linear, flattened, spreading; often with solitary abaxial resin gland; resin canal present. Pollen cones maturing and shed annually, solitary, terminal (rarely in clusters of 2-5, or to 20 or more in Cunninghamia; axillary
in Cryptomeria and Juniperus Sects.

Juniperus and Caryocedrus; in terminal panicles in Taxodium and Metasequoia), simple, spheric to oblong; sporophylls overlapping, bearing 2-10 abaxial microsporangia (pollen sacs); pollen spheric, not winged. Seed cones maturing in 1-2 seasons, shed with short shoots or persisting indefinitely on long-lived axes (shattering at maturity in Taxodium), compound, solitary, terminal (rarely in clusters of 2-5, or up to 100 or more in Widdringtonia; axillary
in Juniperus Sects. Juniperus and Caryocedrus); scales overlapping or abutting, fused to subtending bracts with only bract apex sometimes free; each scale-bract complex peltate, oblong or cuneate, at maturity woody or fleshy, with 1-20 erect (inverted with age in Athrotaxis, Cunninghamia, Glyptostrobus, Taiwania, Metasequoia, Sequoia and Sequoiadendron), adaxial ovules. Seeds 1-20 per scale, not winged or with 2-3 symmetric or asymmetric wings; aril lacking; cotyledons 2-5 (to 9 in Taxodium) (M.P. Frankis [pers. comm. 1999.02.16], Watson and Eckenwalder 1993). All Cupressaceae appear to share a vesicular-arbuscular mycorrhiza (Newman and Reddell 1987, Brundrett 2008 and citations therein) [3].

**Cupressus L.**

Cypress Trees or large shrubs, often pyramidal in youth; monoecious. STEMS: short shoots 4-angled or flat to usually cylindric; in flat sprays or usually arrayed in 3 dimensions. LEAVES decussate, scale-like, closely appressed overlapping. POLLEN CONES terminal, usually yellow. SEED CONES terminal, 6-50 mm long, woody, more or less spheric to broad cylindric, maturing first or second year, usually closed more than 2 years; scales 6-12, peltate, abutting, shield or wedge-shaped; scale projection often present, small, pointed, usually less visible with age. SEEDS 2-many per scale, more or less flat to angled, winged; cotyledons 2-5. ca. 22 spp.; w N. Amer, Medit. to e Asia. (Latin name for Cypress). Wolf, C. B. 1948. Aliso 1:1-250. [1].




**Picture 1**. Pine life cycle. https://flexbooks.ck12.org/cbook/ck-12-biology-flexbook-2.0/section/9.20/primary/lesson/gymnosperm-life-cycle-bio/

**Juniper us L.**

Juniper Shrubs or trees, usually dioecious. STEMS: short shoots 4 angled to cylindric; bark usually thin, peeling in strips or in one species thick, deeply fissured into rectangular plates. LEAVES decussate or tricussate; scale-like to less often awl- or needle-like. POLLEN CONES: 3-5 mm long; sporophylls 6-24, decussate or tricussate; pollen sacs 2-8 per sporophyll. SEED CONES 3-20 mm long, fleshy to fibrous to rarely obscurely woody, berry-like, dry or fleshy, flavorless to resinous (bitter) to sweet, usually glaucous, formed by fusion of scales, more or less spheric, surrounded at base by minute scale-like bracts; scales 3-8, decussate or tricussate. SEEDS 1-3 per scale, terete or angled, unwinged, usually dispersed by animals; cotyledons 2-6. -ca. 60 spp; N. Hemisphere. (Latin name for juniper). Adams, R.P. and T.A. Zanoni. 1979. Southw. Naturalist 24:323-329; Vasek, F.C. 1966. Brittonia 18:350-372; Zanoni, T.A. 1978. Phytologia 38:433-454 [1].

AFTER EXPLAINING THE TOPIC, WE CAN REINFORCE IT USING THE FOLLOWING METHODS

A two-column table (or two-column table) is a method, which can also be called a comparison or matching method.

**Method name**: Matching method.

**Purpose**: This method develops students' attention, memorization, and analysis skills

**Description:**

• On one side of the table (for example, on the left), Latin terms or species are written.

• On the other side (on the right), their Uzbek names are placed.

• The student is required to match each Latin name to the correct Uzbek one.

**Application:**

• In teaching scientific and folk names in biology, botany, and zoology classes.

• In memorizing new terms.

• In increasing vocabulary.

**Task 1: Match the Latin words with their Uzbek counterparts using the table below**

| | |
|---|---|
| Cupressus Sempervirens. | A. Common cypress |
| Juniperus Communis. | B. Common juniper |
| Thuja Occidentalis | C. Western camellia |
| Juniperus Sabina | D. Black juniper |
| Calocedrus decurrens | E. California yellow cedar |
| Juniperus Virginiana | F. Virginia spruce |

| | | | | | |
|---|---|---|---|---|---|
| **1-a** | **2-b** | **3-c** | **4-d** | **5-e** | **6-f** |

**Task 2. Using a Venn diagram, arrange the characteristics of juniper and cypress plants**

**A Venn diagram** is a method for graphically representing the similarities and differences between two or more sets.

**Main features:**

• Each set is represented by a circle.

• Common (similar) signs are written where the circles intersect.

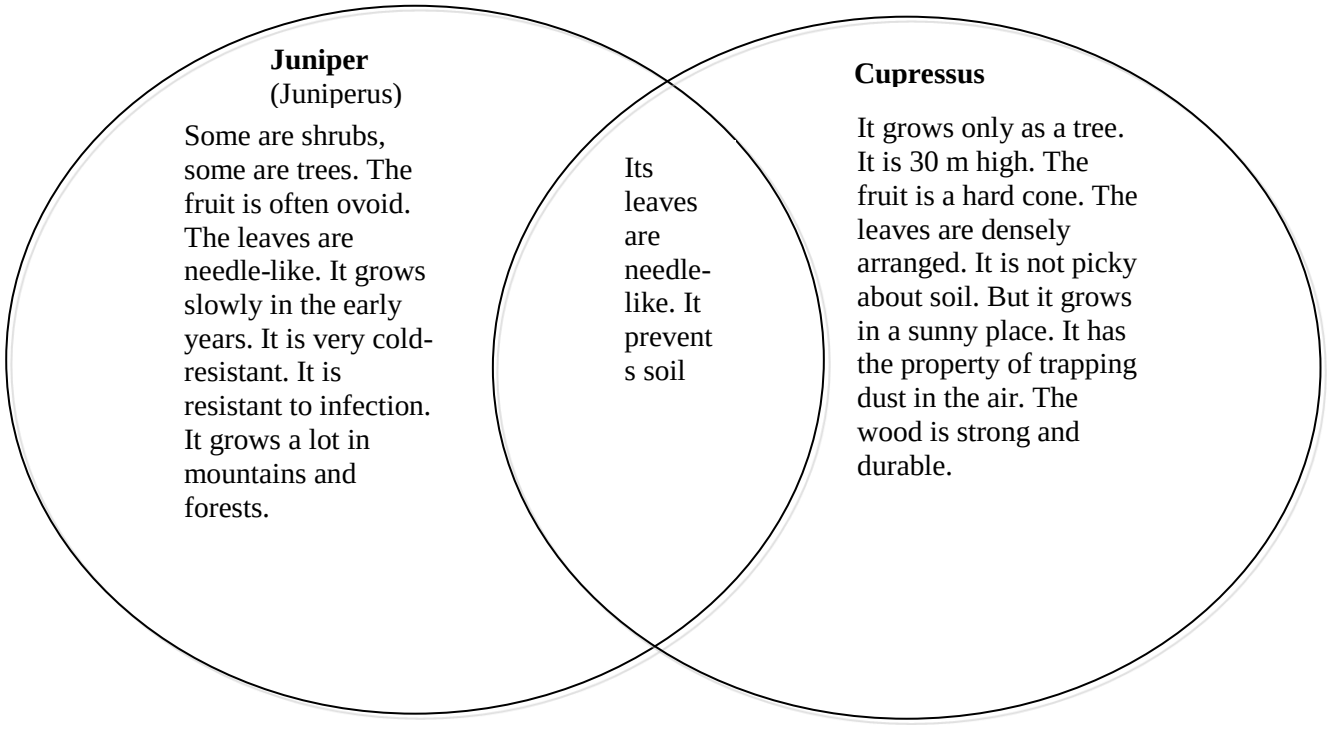
• In the specific (non-intersecting) part of each circle, signs specific to that set are written only.

**Uses:**

• Comparing two or more concepts, phenomena, or objects.

• Clarifying differences and similarities.

• Developing analysis and logical thinking.



The **T-chart method** is a graphical method used to compare and contrast the similarities and differences between two or more objects, phenomena, or concepts. It is structured in the shape of a "T", hence the name "T-chart".

**Task 3. Analyze the *Cupressaceae* family pecularities**

| **Similarities.** | **Differences.** |
|---|---|
| 1. Coniferous plant | Flat needle-like |
| 2. Distinguished by pollen. | Large tree-like |
| 3. Cone fruits | Very tall 100m |
| 4. Evergreen | Sometimes partially deciduous |
| 5. Wood is strong | Evergreen |
| 6. Appearance | Close to the grove |

**The teaching method is crucial for several reasons:**

1. **Engagement and Motivation**: Effective teaching methods can enhance student engagement and motivation. Interactive and student-centered approaches often lead to higher levels of participation and interest in the subject matter.
2. **Learning Styles**: Different students have varying learning preferences (visual, auditory, kinesthetic, etc.). A diverse set of teaching methods can cater to these different styles, making it easier for all students to grasp concepts.
3. **Retention of Knowledge**: Certain methods, such as active learning and collaborative projects, have been shown to improve knowledge retention. When students are actively involved in their learning, they are more likely to remember and apply what they've learned.
4. **Critical Thinking and Problem-Solving**: Methods that encourage inquiry, discussion, and exploration help students develop critical thinking and problem-solving skills. These skills are essential for success in both academic and real-world contexts.
5. **Adaptability**: A good teaching method allows for flexibility and adaptation to meet the needs of diverse classrooms. This can include adjusting for different skill levels, backgrounds, and interests.
6. **Assessment and Feedback**: Effective methods often incorporate formative assessment and feedback, enabling teachers to gauge student understanding and adjust instruction accordingly.
7. **Real-World Application**: Teaching methods that incorporate real-world scenarios and applications help students understand the relevance of their studies, making learning more meaningful.
8. **Social Skills Development**: Collaborative and group-based teaching methods foster social interaction, helping students develop communication and teamwork skills essential for their future careers. [5]

**CONCLUSION**

We will approve the view of Suaad Hadi Hassan Al-Taai on teaching methods that the teaching method is defined as the set of performances that the teacher uses to achieve expected behavior among learners. Teaching methods are one of the components of the curriculum. The prevailing thinking in the field of teaching is the trend towards selection, that is, choosing what appears to be the best of various methods and methods. Selection requires an effort from the teacher, because teaching includes more than knowledge of methods, as the teacher's knowledge of psychological and linguistic theories. Teaching methods alone are neither sufficient nor guarantee success [6].

**REFERENCES**

Jim Bartel. Cupressaceae-Cyprus family. July 1993. Journal of the Arizona-Nevada Academy of Science 2:195-200

Li, Zheng, Anthony E. Baniaga, Emily B. Sessa, Moira Scascitelli, Sean W. Graham, Loren H. Rieseberg, and

Michael S. Barker. 2015. Early genome duplications in conifers and other seed plants. Science Advances 1(10):e1501084.3. Britannica.com – Cupressaceae | Plant family.

https://www.conifers.org/cu/Cupressaceae.php.

**4**.https://flexbooks.ck12.org/cbook/ck-12-biology-flexbook-2.0/section/9.20/primary/lesson/gymnosperm-life-cycle-bio/

**https://www.quora.com/What-is-the-importance-of-the-teaching-method**

**6.** https://www.abacademies.org/articles/teaching-methods-are-a-study-of-their-importance-and-types-in-educational-institutions-13497.html