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Medicinal and nutritional uses of *Urtica dioica* and *Lamium Purpureum*

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Abstract: *Urtica dioica (stinging nettle) and Lamium purpureum (purple dead nettle) have long been used as food and in traditional medicine. The aim of this review was to compare their nutritional value, chemical composition, and reported health-related properties. Studies from scientific databases were grouped by topic and assessed using a five-point scale. U. dioica received a higher comparative score than L. purpureum, while fewer studies were available on the latter. Further research is needed to better understand the safety and potential uses of both plants, especially L. purpureum.*

Keywords: *herbal medicines, phytochemical profile, modern pharmacology, innovative food*

• Introduction

Urtica dioica and *Lamium purpureum* are wild plants with a dual role in traditional diets and herbal medicine. Nettle is widely studied for its nutrient-rich leaves and diverse bioactive compounds, while purple deadnettle is less documented despite its traditional uses and reported phytochemicals [1, 2], as presented in Figure 1.

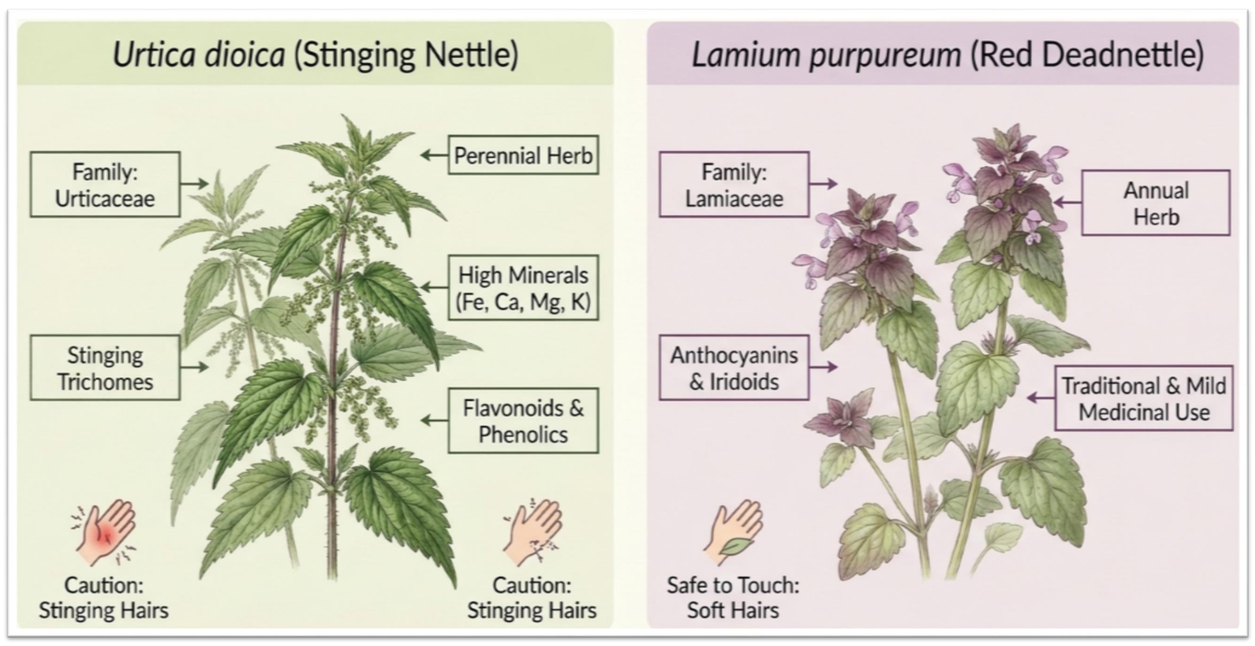


Figure 1. Comparative visual overview of *Urtica dioica* and *Lamium purpureum* highlighting key morphological, mineral, and phytochemical traits based on literature data. (Created with Gemini Notebook, 2026)

The aim of the study was to examine the nutritional and medicinal uses of *Urtica dioica* and *Lamium purpureum*, including their chemical composition, biological activities and potential value in human consumption.

• Material and method

Studies on the nutritional, medicinal, and phytochemical properties of *Urtica dioica* and *Lamium purpureum* were grouped by topic and compared. Selected characteristics were scored from 1 (low) to 5 (high), according to their reported importance and the strength of the available evidence. The scores were used for a comparative assessment of the two species.

• Results and discussions

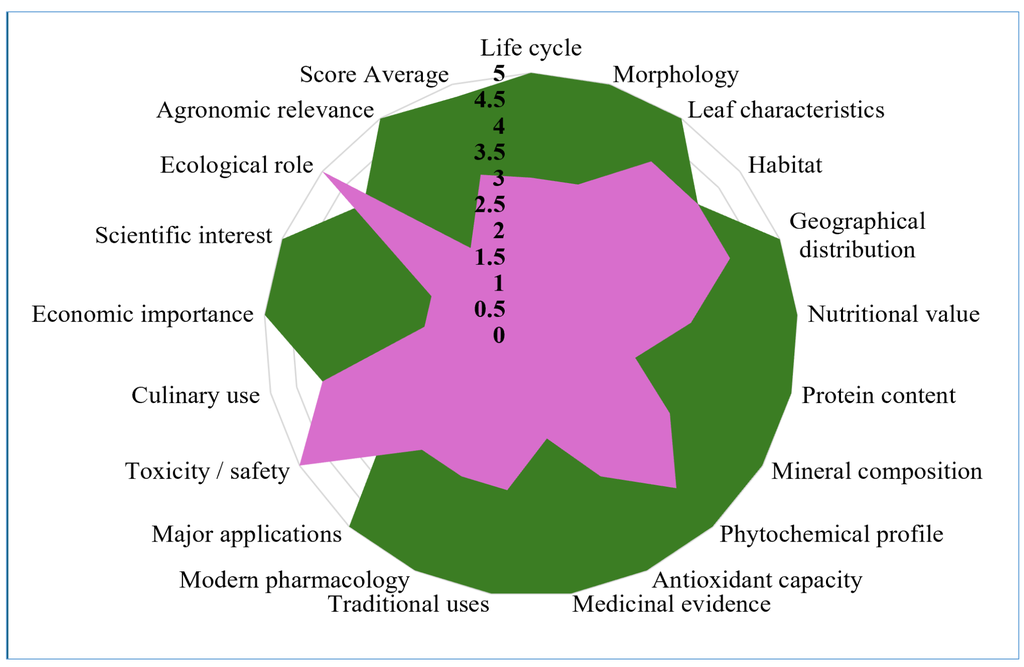


Figure 2. Comparative radar chart showing semi-quantitative scores (1–5) for selected attributes: *Urtica dioica* (green) and *Lamium purpureum* (purple).

As shown in Figure 2, *Urtica dioica* scored higher than *Lamium purpureum* (4.75 vs. 3.20), with stronger scores for nutritional value, phytochemical diversity, and medicinal evidence.
L. purpureum is also used as a wild edible plant and contains bioactive compounds, but fewer studies have examined its properties. The scores compare findings reported in the literature reviewed.

• Conclusions

In this review, *Urtica dioica* scored higher than *Lamium purpureum*, and more research is available on its nutritional and medicinal uses.
Lamium purpureum also appears promising as a food plant and source of bioactive compounds, but it needs further study, especially to assess its safety and potential uses.

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