www.ijarp.com ISSN 2456-9992 Page: 01-03

International Journal Advanced Research Publications

Review Article

Volume: 02
Issue: 02

PHYTOCHEMICALS REPORTED FROM *ELAEOCARPACEAE*-A REVIEW

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Article Received: 27 December 2025, Article Revised: 16 January 2026, Published on: 05 February 2026

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DOI: https://doi-doi.org/101555/ijarp.4926

Elaeocarpacea[1] is a family of 9 genera and about 200 species of shrubs and trees with simple, opposite, or alternate leaves. The flowers have 4-5 sepals, 4-5 or no petals and numerous stamens. Distributed in tropical, sub-tropical and occasionally temperate regions but not in Africa.

Elaeocarpus[2] is a genus of sixty species of evergreen trees and shrubs typically with simple alternate leaves and racemes of small fragrant flowers that bear3-5 fringed petals and numerous stamens. Several species are grown as tender ornamentals and several have edible fruits. The members of the genus are most abundant in the hotter part of India and the Indian Archipelago; a few are found in some of the South Sea Islands, New Zealand and Australia. Several species of the genus are used in Indian Indigenous System of medicine. *Elaeocarpus pierre* is used medicinally in Cambodia and China, the fruit of *E.ganistrus* (Rudraksha) is used by Hindu practitioners in diseases of the head and epileptic fits, the fruit of *E. oblongus* is used as an emetic, the decoction of the bark of E. tuberculatus is used in vomiting of blood and in biliousness, the nuts are used in rheumatism, typhoid fever, and epilepsy. The species of other genus (*Aristotelia, Crinodendron, Vallea*) of the same family *Elaeocarpacea* are mostly grown as ornamentals and for their fruits.

E. serratus[3] is a moderate sized tree found in Eastern Himalayas up to 3000 ft. and in the evergreen forests of North Kanara and Western coast down to Tranvancore. Leaves ovate or obviate, serrate, acuminate and coriaceous. Flowers white, in axillary racemes. Drupe ovoid,

1-1.5 inch long, smooth and greenish, containing a much tubercled, 1-seeded stone. The fleshy portion of the drupe surrounding the stone is subacid and edible, it is pickled or eaten in curries.

Chemical analysis of the edible part of the drupe gave the following values; moisture 77.2, crude protein, 0.69, total carbohydrates 19.53, total sugar, 9.8; ether extract 0.46; fiber 1.49; and mineral matter 0.59; vitamin C, 47mg/100g. Citric acid is the main compound present in the pulp. The seed[4] contain a fixed oil having the following constants; sap. Value 192.52; iodine value 82.66 and acid value, 3.56. The wood is greyish white, and soft, it is little used. It is suitable for linings, small packing cases, match boxes and splints[5,6]. The leaves are used in rheumatism and as an antidote for poison.

A general survey of phytochemicals isolated and the pharmacological activities exhibited by the members of *Elaeocarpaceae* family so far investigated are detailed in Table-1.

Table-1.

Phytochemicals reported from *Elaeocarpaceae.*

Species of *Elaeocarpaceae*	**Phytochemicals reported**
Elaeocarpus lanceofolius[7]	Myricetin, 4'-Me myricetin and their glycosides
Elaeocarpus floribundus[8]	Mearnestin (3,5,7,4', 5'-pentahydroxy 3'-methylether)
Aceratium megalospermum[9]	Aceratioside- a new tetralin glucoside
Muntiga calabura[10]	Seven flavans, three flavones and two biflavans, Kaempferol, quercetin, kaempferol-3-O-galactoside, quercetin-3-O-galactoside, caffeic acid, ellagic acid, chrysin 2', 4'-dihydrochalcone, galangin 3,7-dimethyl ether and 5,7 dihydroxy-8-methoxy flavonol.
Aristotelia fructicosa[11]	Fructicosoline an indole alkaloid.
Aristotelia chilensis[12]	Lignan: dihydro guayaretic acid, guyacasin and isoprogomisin. Flavonoid-3-methoxy calicopterin, 7'methyl sudachitin and quinoline alkaloid.
Elaeocarpus spp[13].	Aristolasicone and 17-epi-aristotelline
Elaeocarpus tuberculatus[14]	Indolizidine and quinolizidine alkaloids.
Elaeocarpus ganitrus[15]	Oleic acid, palmitic acid, stearic acid and myristic acid.
Elaocarpus angustifolius[16]	Iridosome
Elaeocarpus sphaericus[17]	Alkaloids and flavonoids and their glycosides.

In the light of occurrence of flavans, biflavans and highly hydroxylated flavanols. Most of the species used medicinally by indigenous system of medicines, the use of leaves and fruits of this plant E. serratus in rheumatism, antidote for poison, dysentery and diarrhoea.

REFERENCES:

1. Hyam, R. & Pankhurt, R. (1995) "Plants and their Names-A concise Dictionary", Oxford University Press, London. P. 169.
2. Rev. FR. Jean Ferdinand Caius, S.J. (1986) "The Medicinal and Poisonous Plants of India", Scientific Publishers, Jodhpur, India. P. 476.
3. Anon. (1952) The Wealth of India Raw Material, Vol.III, C.S.I.R., India, p.13.
4. Joachim, A. & Panditteseker, P. (1943) Trop. Agriculturist, 99, 13.
5. Chopra, L. (1941) Chem. Abstr., 35, 1832.
6. Rama Rao, M. (1914) "Flowering Plants of Travancore", Govt.Press. Trivandrum.
7. Ray, A.B., Dutta, S.C. & Dasgupta, S. (1976) Phytochemistry, 15, 1797.
8. Dasgupta, S., Dutta, S.C. & Ray, A.B. (1977) Indian J. Chem, 15B, 197.
9. Singh, S.B., Pettit, G.R. (1990) Journal of Natural Products, 53, 1187.
10. Kaneda, N., Pezzuto, J.M., Soejarto, D.D., Kinghorn, A.D., Farnsworth, N.R., Santisuk, T., Tuchindia, P., Udchachon, J. & Reutrakul, V. (1991) Journal of Natural Products, 54, 196.
11. Seetharaman, T.R. (1990) Fitoterapia, 61, 374.
12. Nshimo, C.M., Pezzuto, J.M., Kinghorn, A.O. & Fansworth, N.R. (1993) International Journal of Pharmacognosy, 31, 77.
13. Hai, M.A. & Bick, I.R.C. (1990) Indian Journal of Chemistry, 298, 586.
14. Faure, M., Lissi, E., Torres, R. & Videla, L.A (1990) Phytochemistry, 29, 3773.
15. Cepedes, C., Jakupovic, J., Silva, M & Tsichritizis, F. (1993) Phytochemistry, 34, 881.
16. Quirion, J.C., Husson, H.P., Kan, C., Laprevote, O., Chiaroni, A., Riche, C., Burkard, S., Borscheberg, H.J. & Bick, I.R.C. (1992) Journal of Organic Chemistry, 57, 5848.
17. Michael, J.P. (1993) Natural Products Reports 10, 51.