

1.0 Organism description

Scientific name

Eleutheranthera ruderalis (Sw.) Sch.Bip., Asteraceae.

Common names

Ogiera (Randall 2002).

Synonyms (Randall 2002).

Eleutheranthera ovata Poit. ex Steud.

Eleutheranthera prostrata (L.) Sch.Bip

Cultivars, strains, or variants

None known.

Previously recorded in New Zealand

No (Ministry of Agriculture and Forestry, Landcare Research).

2.0 Summary

- The identification of this plant was not confirmed at the time this assessment was prepared. Therefore it is a provisional assessment only. It relies on a limited number of sources and some sections are not fully assessed.
- *E. ruderalis* is an erect, annual herb growing to 60 cm high, usually much branched.
- It has a pan-tropical distribution; found in the humid tropics and sub-tropics of Africa, America, Asia, Australia and the Pacific. In New Zealand, climate is likely to limit its establishment and spread to warmer areas of the northern North Island.
- It grows in sunny and shady locations, and prefers disturbed areas such as cultivations, pasture, gardens, roadsides and wastelands, but is also known from woodlands, grasslands, and rainforests.
- Limited information was found regarding economic impacts overseas, suggesting that *E. ruderalis* is a relatively insignificant weed throughout its range. It appears to be a minor agricultural and ruderal weed, with minor environmental impacts also reported.
- In New Zealand, economic and environmental impacts are likely to be negligible.

3.0 Basic biology and ecology

3.1 Overseas distribution

- Pan-tropical; tropical and sub-tropical Africa, America, Asia, Australia and the Pacific (W3TROPICOS, USDA, ALUKA).
- Australia; north east Queensland [Cape York to approximately Townsville], Northern Territory [Arnhem Land] and West Australia [Dampier] (AVH).

3.2 Ecology/habitat

- Not fully assessed.
- *E. ruderalis* is an erect, annual herb growing to 60 cm high, usually much branched. The seed is an achene; about 3mm long, and lacks a pappus (Flora of Australia). Being relatively large, the seed may be moderately persistent in the soil seed bank (James pers. comm.).
- It grows in sunny to rather densely shaded locations, in regions with a more or less pronounced dry season (Soerjani et al. 1987, PIER). In Africa it is reported to prefer wet sites (ALUKA).
- The specimen grown in New Zealand did not grow vigorously in the glasshouse and therefore appears unlikely to do well in the natural environment. Seed production was low-moderate (James pers. comm.).
- Habitats are varied. It appears to prefer disturbed areas such as cultivated areas, pasture, grazing land, fallow fields, gardens, roadsides and wastelands, but is also known from woodlands, grasslands, and rainforests (Soerjani et al. 1987, PIER, ANHSIR).
- It is reported to grow at ‘low altitudes’ in Papua New Guinea (PIER), up to 800m in Indonesia (Soerjani et al. 1987), and has been collected at 900m in Queensland (ANHSIR). Found on a variety of substrates - gravelly soil, coral sand, wet sandy soils, and red brown loams (PIER, ANHSIR).
- Not listed as toxic (Randall 2002). Palatable to livestock (FAO).

4.0 Likelihood of establishment and spread

4.1 Environmental tolerances overseas and comparison with New Zealand

4.1.1 Environmental tolerances overseas

- Pantropical; it appears to be confined to the humid tropics and sub-tropics of Africa, America, Asia, Australia, and the Pacific.

4.1.2 Comparison with New Zealand

- The warm and humid northern North Island is the most likely climate match. It is unlikely to establish in regions further south.

4.2 History of spread in other countries

- Not assessed.
- Observed in 1888 in West Java for the first time and has now spread throughout Indonesia (Soerjani et al. 1987).

4.3 Natural dispersal mechanisms and human assisted means of spread

4.3.1 Natural dispersal mechanisms

- Not assessed. The seed is slightly hairy – external transport on animals is a possibility.

4.3.2 Human dispersal

- Human mediated dispersal is likely via transport of seeds in contaminated machinery, produce and soil.

4.4 Distribution of potential habitat in New Zealand

- Habitat in New Zealand is likely to be sunny or shaded, mesic, disturbed areas including cultivated areas, pasture, gardens, roadsides and wastelands. It may also grow in disturbed forest, grasslands, forest margins or scrub.

4.5 Constraints to spread and predicted rate of spread in New Zealand

4.5.1 Predicted rate of spread

- Rate of spread by natural dispersal not assessed, but probably low. It could form widespread populations quickly via human vectors as seed in contaminated soil, produce and machinery.

4.5.2 Constraints to spread

- Climate is likely to limit its establishment and spread to warmer areas of the northern North Island. Other constraints (pests and diseases) were not assessed.

5.0 Consequences

5.1 Overseas impacts

5.1.1 Economic impacts

- Limited information was found, suggesting that *E. ruderalis* is a relatively insignificant weed throughout its range. Holm et al. (1979) list it as a weed of unknown rank only in Jamaica and West Polynesia.
- Pacific; widespread and important only in Tonga. Locally important or present (but not considered weedy) in the Cook Islands, Fiji, Papua New Guinea, Samoa, Solomon Islands, Tokelau and Vanuatu (Waterhouse 1997). Swarbrick (1997) cites it as a minor weed in similar regions in dryland crops, plantations, pasture, gardens and wastelands.
- Asia; not listed in Waterhouse (1993). Abundant and troublesome in arable lands in Sri Lanka (Pemadasa 1976). In Papua New Guinea it is a seasonal weed of new pasture, but has failed to attain rapid cover. It is more commonly found in food gardens (FAO).
- Africa; a common weed of cultivation in wet places near the coast (ALUKA).
- Australia; in the Northern Territory it is a minor problem in four or more locations, while in Queensland it is unranked - either because it is not a problem, or it is not yet recorded in agricultural areas (Groves et al. 2003).

5.1.2 Environmental impacts

- Australia; it is reportedly a minor problem at four or more locations within a state or territory. However, it was also noted to be primarily an agricultural and ruderal weed (Groves et al. 2003).
- No other environmental impacts known.

5.1.3 Other impacts

- None known.

5.2 Potential impacts in New Zealand

5.2.1 Economic

- Economic impact is likely to be negligible. It should be at the limits of its climatic tolerance and impacts overseas are generally minor. Impacts, if any, are possible in crops, pasture, and nurseries.

5.2.2 Environmental

- It is unlikely to have any environmental impact in New Zealand. While it may be partially shade tolerant, it is not recorded as an environmental weed overseas, its growth habit is of no major concern, there is no indication that it is particularly invasive, and it appears to be a weed mainly of ruderal situations.

5.2.3 Other impacts

- It may be a nuisance weed in home gardens and lawns.

6.0 Control techniques

- Not assessed.

7.0 Uncertainty summary

- The potential New Zealand distribution is uncertain but it is likely to be limited by climate to the northern North Island.

- Seed dispersal, growth rate, reproductive capacity, competitiveness, constraints to spread, control techniques and history of spread were not comprehensively assessed.

8.0 References

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