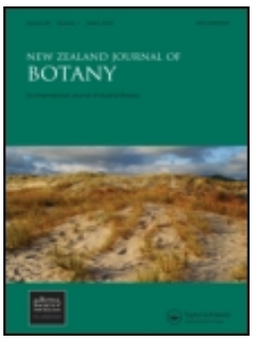

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Senecio esleri (Asteraceae), a new fireweed

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Abstract A new species of erechtitoid *Senecio* is described based on New Zealand material. *S. esleri* is an annual, or rarely a short-lived perennial, herb found in waste places and coastal habitats in Northland and the Auckland area. It has previously been confused with the Australian fireweed *S. bipinnatisectus* and is best distinguished from that species by the setose stems, less divided lower leaves, greater number of involucral bracts, and hairier achenes. Its distribution and habitats indicate that it is naturalised in New Zealand, most probably from Australia.

Keywords *Senecio esleri;* Asteraceae; Compositae; new species; distribution; naturalised plants; New Zealand; Australia

INTRODUCTION

Allan (1961) treated the Australasian fireweeds in the genus *Erechtites* Raf. and accepted 8 indigenous species for New Zealand. However, Drury (1974) followed Belcher (1956) in distinguishing the Australasian group from *Erechtites* and in referring New Zealand species to *Senecio* L. Drury accepted 12 species; of these Webb (in Webb et al. 1988) accepted nine as indigenous to New Zealand, and two as naturalised from Australia. *S. apargiifolius* Walp. was rejected from the New Zealand flora as the record was based on only a single early collection which is probably a hybrid.

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Webb (in Webb et al. 1988) noted that there are two distinct entities among plants referred to *S. bipinnatisectus* in New Zealand. The typical form is widely naturalised and the second entity has been reported only recently from the Auckland area. This second entity is described here as a new species.

TAXONOMY

Senecio esleri C. Webb sp. nov.

Herba annua vel perennis erecta. Caules sparsim vel dense setosi, praecipue in parte superiore. Folia superiora profunde pinnatisecta. Capitula in paniculas disposita, discoidea. Bracteae involucrales (11)–12–13. Achenia 2–2.3 mm longa. *S. bipinnatisecto* similis differt caulibus setosis, foliis inferioribus minus divisis, bracteis involucralibus numerosioribus, acheniisque pilis pluribus praeditis.

Holotypus: CHR 460398, 7 Stilwell Rd, Mt. Albert, Auckland City, *C.J. Webb*, 21.2.1989.

Erect herb, usually annual, rarely a short-lived perennial, up to c. 2 m tall. Stems striate, often tinged purple, sparsely to densely setose especially above, branched above to form inflorescence. Lower cauline leaves almost glabrous to sparsely setose on upper surface, almost glabrous to moderately setose on lower especially on mid vein, apetiolate and long-cuneate, 1–pinnatifid to 1/2–2/3 width, elliptic to narrow-obovate, acute at apex, c. 80–200 × 15–80 mm; segments narrow- to ovate-oblong, irregularly toothed; mid cauline leaves slightly larger, more deeply dissected with narrow-oblong toothed segments, sometimes amplexicaul and often 3-fid at base; uppermost leaves more ovate, sometimes with more or less linear segments. Capitula in loose panicles, 1–2 mm diameter. Supplementary bracts 3–10, lanceolate, ciliolate, 1–2 mm long. Involucral bracts (11)–12–13, linear, usually glabrous, sometimes with a few scattered hairs, 4.5–5.5 mm long. Outer florets c. 24–35, female, filiform; inner florets c. 4–11, hermaphrodite, tubular. Achenes narrowly ellipsoid-cylindric, slightly narrowed and constricted below apex, with 2–3 rows of short antrorse hairs in grooves between or on edges of broad ribs and sometimes appearing evenly hairy, 2–2.3 mm long; pappus 5–7 mm long.

Fig. 1 Stem hairs of *Senecio esleri*. (Photo: R. Lamberts).

Table 1 Characters distinguishing *Senecio esleri* and *S. bipinnatisectus*.

S. esleri	*S. bipinnatisectus*
Stems sparsely to densely setose.	Stems glabrous or with a few fine scattered hairs.
Lower cauline leaves 1-pinnatifid to 1/2–2/3 width, with the segments irregularly toothed.	Lower cauline leaves 1-pinnatifid to at least 2/3 width (often almost to midrib), with the segments again pinnatifid.
Involucral bracts (11)–12–13.	Involucral bracts 8–11–(13).
Achenes with 2–3 rows of hairs in grooves between or on edges of ribs, sometimes appearing evenly hairy.	Achenes with 1 row of hairs on or beside ribs.

Chromosome number: $2n = 60$ (M. I. Dawson, pers. comm.; voucher: CHR 439650, cultivated at Lincoln, ex Mt Albert Research Centre, Auckland, *A. E. Esler*, 1 Sep. 1986).

Distribution: Kaitaia, Whangarei, Auckland City, Waitemata, Whatipu.

Habitats: Roadsides, street margins, rock walls, waste places, gardens, sand dunes.

Etymology: The species is named after Alan Esler who first drew my attention to it.

Representative specimens: CHR 309533, Kaitaia township, *Williams*, June 1979; CHR 456696 B, Glenbervie, Whangarei, *Sykes 433/87*, 10.12.1987; CHR 385307, Mt Albert Rd, Mt Albert, Auckland, *Esler*, 31.12.1984; AKU 19746, Whatipu, West Auckland, *Cameron 4205*, 15.11.1986.

Comparison with other species: *Senecio esleri* is most similar to *S. bipinnatisectus* Belcher, but the two species differ in a number of characters (Table 1). The most obvious differences are in the stem hairs (Fig. 1), in the extent of dissection of the lamina of the lower stem leaves (Fig. 2), and in the achene hairs. In addition, *S. esleri* flowers earlier than *S. bipinnatisectus*. Both species come true from seed and when they co-occur, which they do in the Auckland area, remain distinct.

S. bipinnatisectus was described in *Erechtites* as *E. atkinsoniae* by Mueller (1865). The original description fits the plant commonly known as *S. bipinnatisectus* with respect to the stem hairs and achene hairs in particular but gives the number of involucral bracts as 11–13, a number more typical of *S. esleri*. Belcher (1956) examined type material but could not find capitula with more than 11 bracts. Occasional plants of *S. bipinnatisectus* have most capitula with 12–13 involucral bracts but are referable to that species in all other respects (e.g., CHR 170145, Waitarere, near Levin, *Ritchie*, 17.8.1970; CHR 123299, Lake Alice, *Healy 61/268*, 17.7.1961); however, the species typically has 8–10 bracts. The lectotype of *S. bipinnatisectus* (K, Blue Mountains, *Louise Atkinson* (Belcher 1956)) has 8–12 bracts and conforms with plants traditionally referred to that species in the stem and achene hairs.

Some specimens collected by A. E. Esler from Whangaruru North Head, Whangarei County, in 1972 and 1973 and sent to D. G. Drury at Botany Division, Lincoln, are almost certainly referable to *S. esleri*, whereas others appear to be hybrids with *S. diaschides* as one of the parents. Drury determined one of these specimens as *S. bipinnatisectus* but noted that the plant was unusual for its bristly stems. Field work in that area may assist in determining the

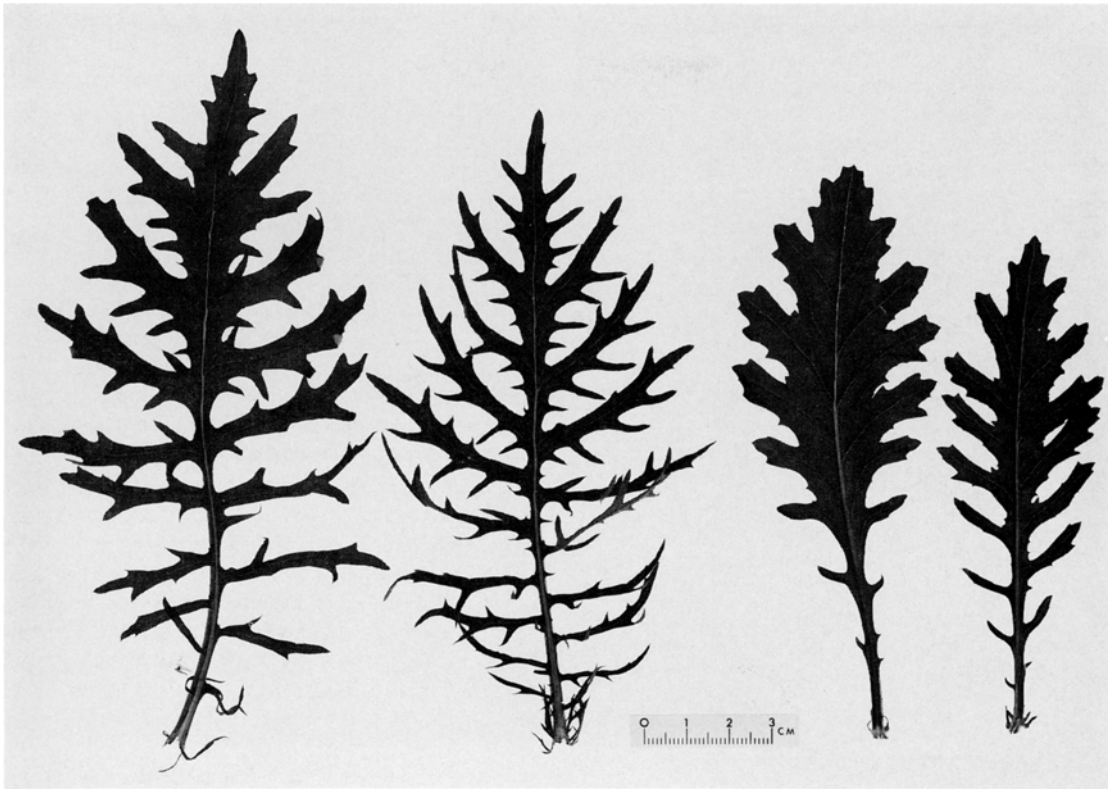

Fig. 2 Lower cauline leaves of *Senecio bipinnatisectus* (left) and *S. esleri* (right). (Photo: R. Lamberts).

status of these collections, but it seems probable that some of them are the earliest collections of *S. esleri* for New Zealand.

The only other taxon that may appear similar to *S. esleri* is *S. hispidulus* var. *dissectus* (Benth.) Belcher but this is immediately distinguished by the less dissected upper cauline leaves and the densely hispid upper surface of the leaf lamina.

S. esleri is known only from disturbed habitats and was not collected in New Zealand until 1972. This suggests that the species is naturalised here but remains unrecognised within its indigenous range. Probably it is indigenous to Australia but has not been distinguished there from the endemic *S. bipinnatisectus*.

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