

Long Persistence and Other Aspects of Variants of False Mayweed, *Tripleurospermum maritima*, at Sackville, New Brunswick

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Erskine, A. J. 2010. Long persistence and other aspects of variants of False Mayweed, *Tripleurospermum maritima*, at Sackville, New Brunswick. *Canadian Field-Naturalist* 124(4): 276–277.

Over a 25-year period, plants of *Tripleurospermum maritima* with aberrant inflorescences have been observed growing without cultivation by Crescent Street in Sackville, New Brunswick. Aberrant plants varied between years in locations, suggesting reproduction by seed. Plants with variant inflorescences comprised about one percent of total plants in counted samples. As many as 100 variant plants were found in a year. The site may have received toxic waste disposal causing a mutation that resulted in observed aberrations. The inflorescence aberrations are primarily of two kinds; those with only white rays throughout, and those with some yellow disc flowers that later were concealed by white rays. A third aberration involved inflorescences that appeared nearly normal when first seen, but later developed to the second preceding form. Plants with aberrant inflorescences did not differ from normal plants in morphology or flowering time. Aberrant inflorescences appeared somewhat later in the flowering period than flowering in plants with normal inflorescences.

Key Words: Mayweed, *Tripleurospermum maritima*, *Matricaria maritima*, variant, aberration, New Brunswick.

A False Mayweed (*Tripleurospermum maritima* (L.) W. D. J. Koch, also *Matricaria maritima* L.) with an aberrant inflorescence was first noticed growing without cultivation, near a dumpsite, by Crescent Street in Sackville, New Brunswick, in 1985. Despite broader searches, the only aberrant plants that have been found later are from this area of the town (Erskine 2003a,b). Aberrant plants occurred in the same general areas each year (2003–2009) but were often more than one m apart in successive years, suggesting reproduction by seed rather than by vegetative means. From July–August counted samples, variant plants comprised about one plant in every 100 total plants, thus: 2003 – 18 of 1580; 2005 – 22 of 2000; 2006 – 10 of 850; 2007 – 9 of 850. Variant plants were found (first sightings of individual plants) as early as 9 July (2008) and as late as 25 October (2003,2006). Total variant plants found per year ranged from 28 (2007) to 103 (2008), the largest number following the most drastic disturbance. The site may have received toxic waste disposal causing a mutation that resulted in persisting aberrations not unlike some reported for other Asteraceae (Fambrini et al. 2003).

The inflorescence aberrations are primarily of two kinds; those with only white rays from the start of development (Figure 1, above), and those that had some yellow disc flowers that later became concealed by white rays (not illustrated). A third aberration involved

inflorescences that appeared normal at the start, but later developed into the second of the preceding forms (Figure 1, below). There were no obvious differences



FIGURE 1. Above, inflorescences of variant False Mayweeds with only white ray flowers, some occluding the disc and others around the edge of the inflorescence. Photo by Sally Erskine Doucette at Sackville, New Brunswick, 2004. Below, an inflorescence of variant False Mayweed of 3rd type, with many normal disc flowers and a few ray flowers among them, plus normal ray flowers around the edge of the inflorescence. Photo by Thomas Erskine at Sackville, New Brunswick, 2010.

in morphology between normal plants and those with aberrant inflorescences (other than differences in the inflorescences). Flowering time was also similar for both variant and non-variant plants and was apparently governed by disturbance, with plants in recently disturbed habitats flowering earlier. Aberrant inflorescences occurred somewhat later in the flowering period than flowering in plants with normal inflorescences.

Flowering normally begins in early July and aberrant inflorescences begin to appear one to three weeks later.

Additional information on these Mayweed variants at Sackville is available at the National Herbarium of

Agriculture and Agri-Food Canada (DAO) in Ottawa or from the author.

Literature Cited

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Received 8 September 2010

Accepted 8 December 2010