

Scots lovage, *Ligusticum scoticum*, is spreading in the Åland Islands, SW Finland

Mikael von Numers, Carl-Adam Hægström, Eeva Hægström, Helene Franzén, Johan Franzén & Ralf Carlsson

Mikael von Numers, Åbo Akademi University, FI-20500 Åbo, Finland
Carl-Adam Hægström, Finnish Museum of Natural History, Botanical Museum, P.O.B 7, FI-00014 University of Helsinki, Finland
Eeva Hægström, Tornfalksvägen 2 bost. 26, FI-02620 Esbo, Finland
Helene & Johan Franzén, Bänö, AX-22710 Föglö, Åland, Finland
Ralf Carlsson, Högbäckagatan 10, AX-22100 Mariehamn, Åland, Finland

Scots lovage, *Ligusticum scoticum* L., was probably collected already in 1892 in the Åland Islands, but it was not reported from Åland until 1970. Since then, the species has been found in an increasing number of localities. Here we report about 25 new localities found 1992–2008. There seem to be two centres for the species, one in the westernmost islands of Åland, between the mainland of Eckerö and the Signilskär archipelago, and the other in the northern islands of Föglö. A more systematic investigation in the archipelagos of Åland could yield new localities.

1. Introduction

Scots lovage, *Ligusticum scoticum* L., was collected for the first time in the Åland Islands, without further particulars, already on 21 July, 1892 by O. Tuurala (voucher specimen in H). This find was not recognised until one hundred years later (Hægström *et al.* 1992). This is the oldest record of *L. scoticum* in the Baltic Sea area. The next observation was made in Blekinge, S Sweden in 1927 (Erikson 1927).

Almost 80 years elapsed before the next observations of *L. scoticum* in Finland. The species was found on the islet of Isokallio in the Oura archipelago of Merikarvia at the W coast in 1968, but the find was not reported until 1970 (Ellilä 1970). The species later dispersed to several islands in the Oura archipelago (Koskinen 1986, Koskinen & Lampolahti 1989, Lampolahti & Suominen 1996).

However, there is a voucher specimen in H, which according to the label, was collected, on a seashore in Espoo at the S coast of Finland on 30 July, 1943 (or 1948). The well-developed specimen was assigned by the collector M. Puranen to *Aegopodium podagraria* L. It was, however, determined as belonging to *L. scoticum* by Arto Kurto in 1979. He doubted the stated origin of the voucher specimen, as it was collected for a school herbarium.

Törnroth (1970) reported about his observation of the species in six localities in the westernmost archipelago of the Åland Islands in 1969. Later, the populations on these islands increased, and several new populations were found in both islands and on the mainland of Eckerö, the localities with *Ligusticum scoticum* amounting to 12 by 1990 (Hægström *et al.* 1992). One locality in the island of Enklinge in Kumlinge was reported by Hinneri & Santamala (2000).

2. New finds in the Åland Islands

Since 1990, we have found *Ligusticum scoticum* in 25 formerly unknown localities (Fig. 1). The localities are reported from west to east. The coordinates are according to the Finnish uniform grid system, Grid 27°E.

1. Eckerö: Torp, Degersand, on the sandy beach, one plant in the *Carex arenaria* meadow about 20 m W of the rocks at the eastern edge of the beach, 66945:0896, June 12, 2002 (C.-A. Hæggeström & E. Hæggeström = CAH & EH). – One specimen (no. 8 in Hæggeström *et al.* 1992) was found already in 1975 on the seashore rocks about 100 m SSE of the new locality.
2. Eckerö: Storby, Västerön, Rödklobb, one plant in a rock crevice on the SW rocks, 67042:0838, July 9, 2006 (CAH & EH). – This plant is located quite near Holger Törnroth's find of 1969–72 (no. 6 in Hæggeström *et al.* 1992).
3. Eckerö: Finbo, one plant on a stony and bouldery shore towards S about 550 m S of the farm Södergård, 67149–67150:0909, August 4, 2005 (CAH & EH).
4. Hammarland: Sälskär, one large stand on *Fucus* wrack in a tiny bay between the rocks on the SE shore of the lighthouse island, 67228:0928–9, August 3, 2005, CAH 9022 & EH (H). – The flora of Sälskär was studied by Widlund (1951) in 1913, 1932, 1946 and 1947; he did not observe *Ligusticum* then.
5. Jomala: Högsjär, six flowering plants and many seedlings on the S stony and bouldery shore of the island Högsjär, 66890:0949, August 8, 2006, Carl-Adam Hæggeström 9224 & Ralf Carlsson (H).
6. Föglö: Bänö, Enskär, a few luxurious plants on the N shore, 66852:1436, July 20, 1992, Helene Franzén & Johan Franzén (HF, JF) (H; cf. Cedergren Gelting 1993). This was the first locality for *Ligusticum scoticum* in the archipelago of Bänö. The species was still seen in this locality by Johan Franzén in 1999. It disappeared after that because of the wash of the ships passing immediately N of the island.
7. Föglö: Klåvskär, Stora Sandören, one tall plant on the southernmost part of the beach on the E shore, 66678–9:1434, August 20, 2006, CAH 9283, EH & JF (H).
8. Föglö: Bänö, on the islet Enskärs Västra Kläppen between Rönskär and Brandholm, 66848:1434, 2006 JF; > 50 plants, June 24, 2007, JF, HF & Torsten Stjernberg.
9. Föglö: Bänö, Enskär, SW point, > 10 plants, 66848:1434, June 24, 2007, JF, HF & Torsten Stjernberg.
10. Föglö: Bänö, Madrasskläppen, N bay, 5–10 plants, 66842:1438, 2007, JF.
11. Föglö: Bänö, Killingsören, N bay, 5–10 plants, 66843:1432, 2007, JF.
12. Föglö: Bänö, Rönskärs grundet, > 10 plants, 66846:1429–1430, 2007, JF.
13. Föglö: Bänö, Rönskär, NE shore near the E point, > 10 plants, 66849:1431, 2007, JF.
14. Föglö: Ulversö, Västra Kalskär, NE bay, 1 plant, 66844:1421, 2007, JF.
15. Föglö: Ulversö, Kvarteskär, Boknobba, > 10 plants, 66854:1426, 2007, JF.
16. Föglö: Ulversö, Kvarteskär, W side of NW point, < 5 plants, 66856:1423, 2007, JF.
17. Föglö: Överö, Björkgrund, more than ten flowering and fruiting plants on the stony and bouldery shore in the E side of the islet, 66843:1397, July 20, 2007, CAH 9392 & EH (H); < 5 plants seen in the same place by JF, 2007.
18. Föglö: Överö, Västra Båthusviken, 1 plant, 66843:1406, 2007, JF.
19. Brändö: Jurmo, Långören, on the shore of the bay towards NNE, 67320:1778, July 1, 2006, (Mikael von Numers = MvN). – The island was studied by Eklund (1958) in 1933; he did not observe *Ligusticum* then.
20. Brändö: Jurmo, Södra Härän, three plants on a sandy-gravelly shore on the NW part, 67281:1706, July 10, 2007, MvN. – The island was studied by Eklund (1958) in 1932; he did not observe *Ligusticum* then.
21. Brändö: Jurmo, Grisslegrundet, about five plants on the N shore, 67310:1688, July 10, 2007, MvN. – The island was studied by the author MvN in 1990; he did not observe *Ligusticum* then.
22. Brändö: Jurmo, Lillklyndan, a few flourishing plants on and at *Fucus* wrack on the N shore, 67341:1762, July 17, 2007, MvN. – The island was studied by Vaahtoranta (1964) and she did not observe *Ligusticum* then.
23. Brändö: Hullberga, Gloskär, about ten plants

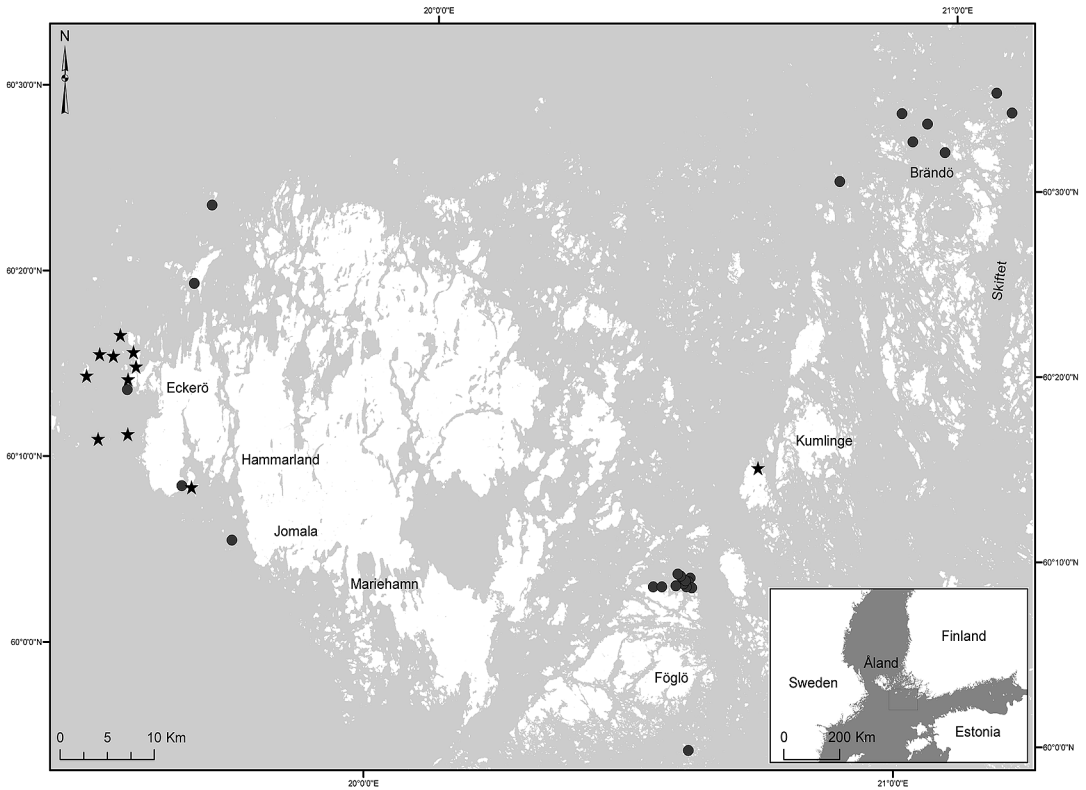


Fig. 1. The distribution of *Ligusticum scoticum* in the Åland Islands. ★ = old record, ● = new record.

on a sandy-gravelly shore on the W part, 67292:1673, July 10, 2007, MvN. – The island was studied by Eklund (1958) in 1934; he did not observe *Ligusticum* then.

24. Brändö: Hullberga, Olsklobb, abundant on the whole S shore, 67320:1661, July 27, 2007, MvN. – The island was studied by Eklund (1958) in 1934; he did not observe *Ligusticum* then.

25. Brändö: Tvidskär, one plant on a rocky shore, 67252:1597, July 14, 2008, MvN. – The island was studied by Eklund (1958) in 1932, and *Ligusticum* was not observed then.

3. Discussion

Our mostly sporadic visits on suitable seashores for *Ligusticum scoticum* has resulted in 25 new localities spread from Eckerö in the west to Föglö in the south, and Brändö Jurmo in the northeast of

Åland. It is obvious that *Ligusticum scoticum* is spreading readily in the Alandian archipelago. There seem to be two centres for the species, one in the westernmost islands of Åland between the mainland of Eckerö and the Signilskär archipelago, and the other in the northern islands of Föglö. However, as no systematic investigations have been performed in most of the archipelagos of Åland, there may be many more localities yet to be discovered. The island shores of the area to the east of the Skiftet strait, including the Kökar area, have been extensively surveyed by MvN during the past few years (e.g. von Numers & Korvenpää 2007), but *Ligusticum scoticum* has not been encountered there. There is, however, one finding on an island near the northernmost part of the Skiftet strait on the east side (Nurmi 2004).

Ligusticum scoticum has enlarged its area northwards along the shores of the Bothnian Sea during the last decades, both on the Swedish (Cedergren-Gelting 1993) and Finnish side. The spe-

cies has been found in more than 30 localities along the west coast of Finland, from Kustavi in the province of Regio Aboensis in the south (Hinneri & Santamala 2000, Nurmi 2004) via the archipelago of the province of Satakunta (Lampolahti & Suominen 1996) to the archipelago of South Ostrobothnia (Oa), namely in two islands in the archipelago of Kristinestad (Kristiinankaupunki) in 1996 (voucher specimens in H) and in five islands in the Rönnskären archipelago in Malax (Maalahti) in 1998–99 (voucher specimens in H; cf. also Lampolahti & Suominen 1996, Enejtjärn & Molander 2008). Here the species was observed in three of the islands already in 1996, according to the label on one voucher. A new locality is also recorded in the island Reposaaari (Räfsö) off Pori at the west coast almost 20 km S of the Oura archipelago (Taivainen 2007, photo).

Kurto & Helynranta (1996) reported *L. scoticum* from the E archipelago of Helsinki. The species grew in more than tens separate localities between Nordsjö (Vuosaari) and Villinge (Villinki).

Ligusticum scoticum was formerly used as a remedy both for livestock and man, and as a vegetable instead of parsley and other vegetables (Nyman 1867, Høeg 1976). It has got a renewed interest in recent years, which is seen, e.g. in the fact that *L. scoticum* is available both as seed and living plants for use as an ornamental, vegetable and medicinal plant (e.g. B & T World Seeds 2008, Chiltern Seeds 2008, Fothergill's Seeds 2008, Pflanzenreich 2008). Thus the risk for its intentional or unintentional dispersal is increasing. However, the finds hitherto – at least in the Åland Islands, are most probably spontaneous.

References

- B & T World Seeds 2008: <http://www.b-and-t-world-seeds.com/carth.asp?species=Ligusticum%20scoticum&sref=51109> 21 January 2008.
- Cedergren-Gelting, K. 1993: Vad har hänt med strandloka, *Ligusticum scoticum*, sedan 1943? (Changes in the distribution of *Ligusticum scoticum* in Norden since 1943.) — Svensk Bot. Tidskr. 87: 255–261.
- Chiltern Seeds 2008: <http://www.edirectory.co.uk/chilternseeds/pages/moreinfo.asp?pe=DBFBHEGGEQ+ligusticum+b+scoticum+b&cid=211> — 21 January 2008.
- Eklund, O. 1958: Die Gefässpflanzenflora beiderseits Skiftet im Schärenarchipel Südwestfinlands. Kirchs-
spiele Korpo, Houtskär, Nagu, Iniö, Brändö, Kumlinge, Sottunga und Kökar. — Bidrag till Kännedom af Finlands Natur och Folk 101: 1–327, 85 maps.
- Ellilä, K. 1970: *Ligusticum scoticum* L. Merikarviaalla. [The first observation of *Ligusticum scoticum* in Finland.] — Memoranda Soc. Fauna Flora Fennica 46: 5.
- Enejtjärn, A. & Molander, L.-L. 2008: Rönnskär. — <http://www.kvarkenguide.org/ronnskarsv.html>
- Erikson, J. 1927: *Ligusticum scoticum* i Blekinge. — Svensk Bot. Tidskr. 21: 365–367.
- Fothergill's Seeds 2008: <http://fothergills.co.uk/en/ligusticum-scoticum-2993.aspx> — 21 January 2008.
- Hæggström, C.-A., Törnroth, H. & Stjernberg, T. 1992: Records of *Ligusticum scoticum* (Apiaceae) on the Åland Islands, SW Finland. — Memoranda Soc. Fauna Flora Fennica 68: 11–15.
- Hinneri, S. & Santamala, E. 2000: Rantaputki Uudenkaupungin ja Kustavin (V) sekä Kumlingen (A) saaristoissa. (New records of *Ligusticum scoticum* in SW archipelago of Finland.) — Lutukka 16: 43–46.
- Høeg, O. A. 1976: Planter og tradisjon. Floraen i levende tale og tradisjon i Norge 1925–1973. [Plants and tradition. The flora in living talk and tradition in Norway 1925–1973.] — Universitetsforlaget, Oslo, Bergen & Tromsø. VIII + 751 pp.
- Koskinen, S. 1986: Rantaputki (*Ligusticum scoticum*) Merikarvian Ourassa (St). (*Ligusticum scoticum* in the Oura Archipelago off Merikarvia, W Finland.) — Lutukka 2: 43–44.
- Koskinen, S. & Lampolahti, J. 1989: Suikeanoidanlukko ja rantaputki voimissaan Merikarvan Ourassa. (The Oura Archipelago in W Finland, a stronghold for *Botrychium lanceolatum* and *Ligusticum scoticum*.) — Lutukka 5: 70–72.
- Kurto, A. & Helynranta, L. 1996: Helsingin kasveja 1. Yllättäjiä. (Vascular plants of Helsinki 1. Surprising finds.) — Lutukka 12: 12–18.
- Lampolahti, J. & Suominen, J. 1996: Rantaputki myötätulessa Pohjanlahdella. (*Ligusticum scoticum* spreading along the east coast of the Gulf of Bothnia.) — Lutukka 12: 115–118.
- von Numers, M. & Korvenpää, T. 2007: 20th century vegetation changes in an island archipelago, SW Finland. — Ecography 30: 789–800 + supplementary data.
- Nurmi, J. 2004: Rantaputkia ynnä muuta kiinnostavaa Kustavissa (V). (*Ligusticum scoticum* and some other interesting finds in the southwestern archipelago.) — Lutukka 20: 27–28.
- Nyman, C. F. 1867: Utkast till svenska växternas naturhistoria eller Sveriges fanerogamer skildrade i korthet med deras växtställen och utbredning m.m., deras egenskaper, användning och historia i allmänhet. Första delen. — N. M. Lindh, Örebro. 431 pp.
- Pflanzenreich 2008: http://www.pflanzenreich.com/top_pflanzen_ligusticum_scoticum_schottisches_liebstoedel,pid,1451,rid,529,gartenkatalog.html — 21 January 2008.

Taivainen, J. 2007: Jarin nettikasvio. — <http://www.eurofinland.com/~jata/kasvio/html/rantaputki/html> — 12 January 2007.

Törnroth, H. 1970: *Ligusticum scoticum* L. funnen på Åland. [*Ligusticum scoticum* found on Åland Islands.] — Memoranda Soc. Fauna Flora Fennica 46: 6–10.

Vaahtoranta, L. 1964: Die Gefäßpflanzenflora im Schärenhof von Pyhämaa und Pyhäranta am Bottnischen

Meerbusen, Südfinnland. — Ann. Bot. Fennici 1: 292–363.

Widlund, U. 1951: Förteckning över kärlväxter på Sälskär och Norrskär i Ålands nordvästra skärgård. [Vascular plants found on Sälskär and Norrskär in the northwestern archipelago of Åland.] — Memoranda Soc. Fauna Flora Fennica 26: 100–107.