

Edward Wainio — a pioneer of floristic research on the borderland between Northern Finland and Russian Karelia

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Edvard August Vainio (1850–1929, until 1877 Lang, 1877–1919 Wainio) was a world-renowned lichenologist. In his youth, however, he worked mainly with vascular plants and the subject of his doctoral dissertation (1878) was on plant geography.

Between 1875 and 1877 he studied the then poorly known regions in the borderland between the Grand Duchy of Finland and Russian North Karelia, an area between 63°18'–65°25'N lat and 29°01'–31°42'E long. In this area, only Kuusamo and the Paanajärvi regions were floristically somewhat known, while the rest was almost totally unexplored "terra incognita". In spring 1875, before Wainio started out on his first excursion to North Karelia, prof. W. Nylander wrote in a letter from Paris: "It is pleasing, but ... truly it must be one of the poorest parts of the country, so even with his excellent capacity, it may be difficult to find many curiosities in such an area. He should go further, make a leap to the northwestern corner of the Onega region" (free translation from the quotation in Vitikainen 1999: 136). Later, in the autumn of the same year, Nylander, however, had to confess that he had misjudged the situation and he wrote: "It is good that Cand. Lang has found many novelties, even in Nurmes which, when I was travelling there, seemed to be a piece of the Sahara in Finland" (Vitikainen 1999: 136).

Field excursions in the remote backwoods of the Finnish-Karelian borderlands were at that time strenuous indeed. Against this background the list of sites visited by Vainio is very impressive.

Soon after his second excursion (in summer 1877) Wainio defended his academic dissertation in 1878. It was the first dissertation in biology written in the Finnish language. It contained a mass of information on physical geography, vegetation and flora from this scientifically largely unknown region. In his obituary of Vainio, Prof. Kaarlo Linkola wrote about this and another of Vainio's phytogeographical works: "The descriptions of the localities and their vegetation are thorough and consistent, they are certainly among the best that have been written in Finland on these subjects. Both these papers hold a prominent position in the history of Finnish botany, being the first publications on plant geography in the Finnish language, and as such the fundament of the Finnish terminology on plant geography" (Linkola 1934: 6).

Mainly on the basis of floristic characteristics and also with due consideration to the phytogeographical features, Wainio (1878) distinguished altogether ten regions in his study area. He then grouped these minor regions into six provinces. Prior to that time all of northern Finland north of 64°N lat had been divided into three provinces only: part of *Ostrobottnia australis* (Oa.), northern Ostrobottnia (O.) and *Lapponia fennica* (L.). In the Russian part of Eastern Fennoscandia only two regions were distinguished: *Karelia rossica* (Kr.) and *Lapponia rossica* (Lr.) (Nylander & Sælan 1859; Fig. 1).

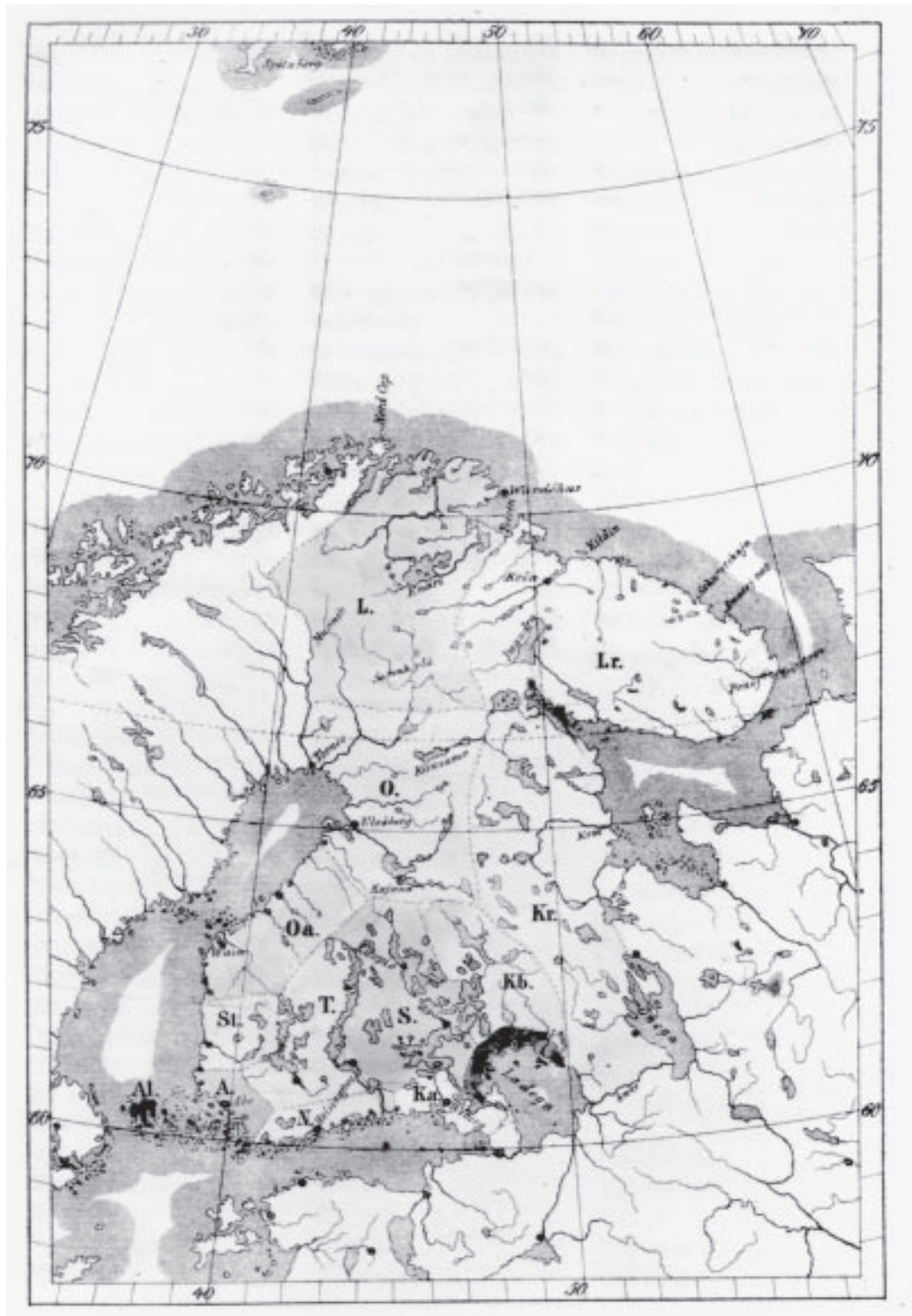


Fig. 1. The first biogeographical division of Eastern Fennoscandia (Nylander & Sælan 1859).

Wainio's division was as follows (Wainio's terms *kunta* and *maakunta* have in the following been translated as *county* and *province*):

- I The province of North Karelia (Pohjais-Karjalan maakunta)
- 1. The county of Pielisjärvi (Pielisjärven kunta)
- 2. The county of Lieksa (Lieksan kunta)
- II The province of Olonets Karelia (Aunuksen-Karjalan maakunta)
- 3. The county of East Repola (Itä-Repolan kunta)

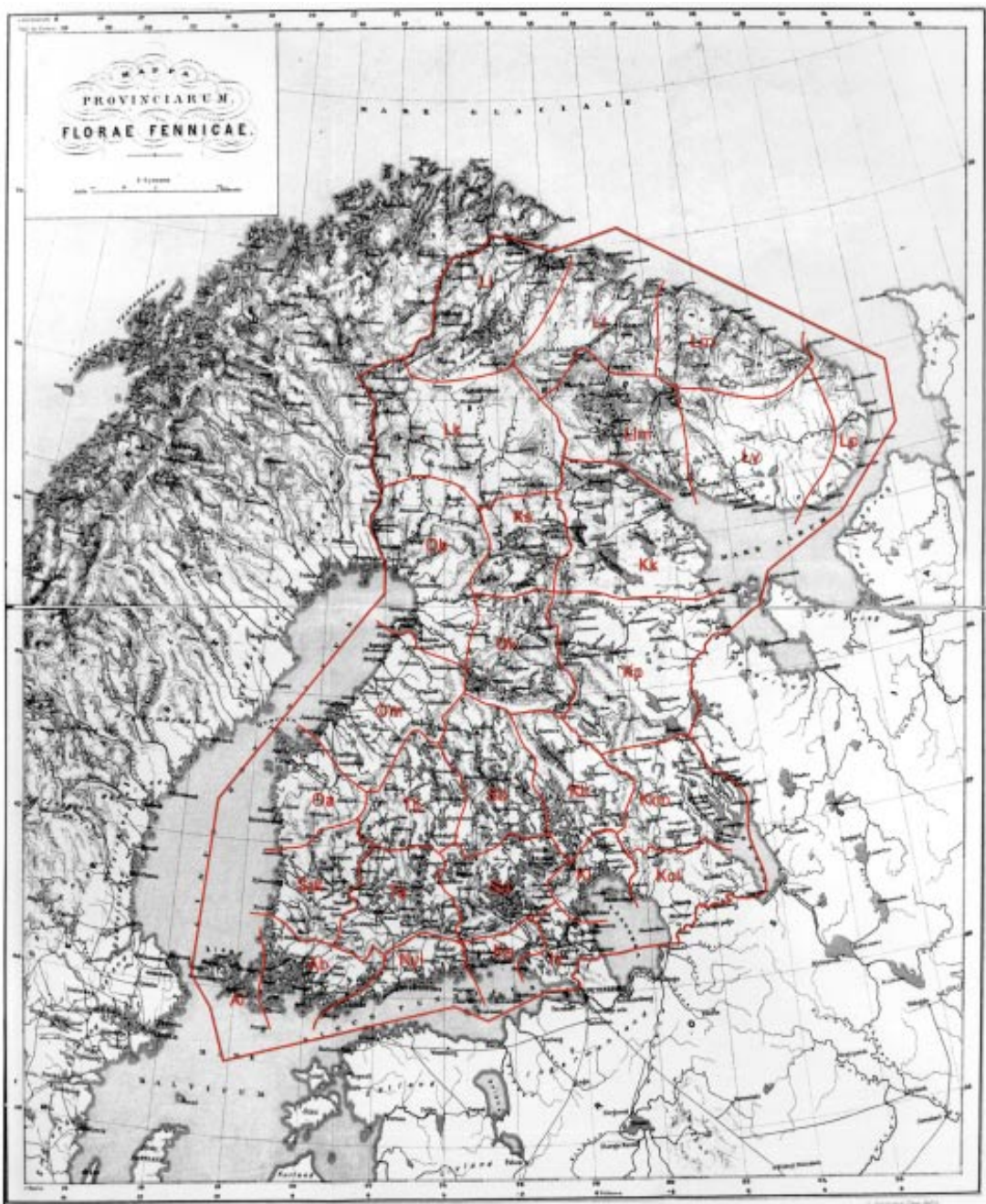


Fig. 2. The biogeographical division of Eastern Fennoscandia according to Hjelt (1882).

- III The province of Kianta (Kiannan maakunta)
- 4. The county of Kuhmo (Kuhmon kunta)
- 5. The county of Kianta (Kiannan kunta)
- IV Central Russian Karelia (Keskinen Venäjän-Karjala)
- 6. The county of Kiimasjärvi (Kiimasjärven kunta)
- 7. The county of Kuitti Lakes (Kuittijärvien kunta)
- V The province of Tuoppajärvi (Tuoppajärven maakunta)
- 8. The county of Kiestinki (Kiestingin kunta)
- 9. The county of Paanajärvi (Paanajärven kunta)
- VI The province of Kuusamo (Kuusamon maakunta)
- 10. The county of Kuusamo (Kuusamon kunta)

Wainio was scrupulous in his treatment of the floristic characteristics of each of these regions on the basis of both his own observations and other available information.

He also devoted a special chapter to the question of the eastern boundary of the Finnish flora area bordering Russian Karelia. In his opinion it mainly followed the state boundary of that time with one interesting exception. He came to the conclusion that the county of Paanajärvi floristically resembled Russian Karelia to such a degree that it had to be combined with Russian Karelia (Wainio 1878: 138).

It is amazing to see how Wainio already then, on the basis of his relatively limited material, understood so clearly the essential features of the different regions; the similarities and dissimilarities between them. In 1882, when Hjelt first presented the basis of the present biogeographical division of Eastern Fennoscandia, the mutual boundaries of the then new provinces *Karelia borealis* (Kb, North Karelia), *Karelia onegensis* (Kon), *Ostrobothnia kajanensis* (Ok, Kainuu), *Karelia pomorica* (Kp), *Regio kuusamoënsis* (Ks, Kuusamo) and *Karelia keretina* (Kk) correspond in the main with the suggestions of Wainio (with the exception of the boundary between *Regio kuusamoënsis* and *Karelia keretina*) (Fig. 2). They have also continued to be valid until the present time (e.g. Hylander 1953; Heikinheimo & Raatikainen 1971). The only major alteration since Hjelt's map was published (1882) is that the province *Karelia pomorica* of that time has now been specified as *Karelia pomorica occidentalis* (Крос).

In Russian Karelia a rather similar division was also suggested by Раменская (1960) for the northern area, with, however, different names for the regions. Recently, Кравченко *et al.* (2000) have recommended the use of Finnish nomenclature for the provinces in the Russian part of Fennoscandia as well.

The pioneering work of Wainio more than a hundred years ago has formed a solid basis for biogeographical studies in a large area of the remote Finnish–Russian borderland. It is with admiration that we acknowledge his important achievements in the field of phytogeography as well as in lichenology.

Acknowledgements

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References

- Heikinheimo, O. & Raatikainen, M. 1971: Paikan ilmoittaminen Suomesta talletetuissa biologisissa aineistoissa (Ortbeteckning för biologiskt material tillvarataget i Finland. The recording of localities of biological finds in Finland). — *Annales Entomologici Fennici* 37:1–27.
- Hjelt, Hj. 1882: *Conspectus Florae Fennicae*. I. — *Acta Societatis pro Fauna et Flora Fennica* 5(1):1–562.
- Hylander, N. 1953: *Nordisk kärleväxtflora I*. — Almqvist & Wiksell, Stockholm. 392 p. + 1 map.
- Кравченко А.В., Гнатюк Е.П. & Кузнецов О.Л. 2000. Распространение и встречаемость сосудистых растений по флористическим районам Карелии. Петрозаводск. Карельский научный центр РАН. 75 с.
- Linkola, K. 1934: Edvard August Vainio 1853–1929. — *Acta Societatis pro Fauna et Flora Fennica* 57(3):1–26.
- Nylander, W. & Sælan, Th. 1859: *Herbarium Musei Fennici*. Förteckning öfver Finska Musei växtsamling. — Finska Litteratur-Sällskapets tryckeri, Helsingfors. 118 p. + 1 map.
- Раменская М.Л. 1960: *Определитель высших растений Карелии*. Петрозаводск. 485 с.
- Wainio, E. 1878: *Kasvistonsuhteista Pohjais-Suomen ja Venäjän-Karjalan rajaseuduilla*. — Academic dissertation. J.C. Frenckell ja Poika, Helsinki. 1–160 & I–LVIII p.
- Vitikainen, O. 1999: William Nylander ja Edvard August Vainio — Suomen jäkälätutkimuksen vaiheita. — *Luonnon Tutkija* 103(4):135–137.