

2 Bryophyte research in Tyrol

The scientific bryological exploration of the Alps and the Tyrolean mountains intensified by the end of the 18th century. For example the studies of Hoppe (1799), Frölich (1791) and Wulfen (1776, 1794) were important in the early stages (see Gärtner 1990; Grims 1999). In the 19th century, bryological collecting in the Alps became en vogue and famous bryologists, among them Bamberger (1853), Lorentz (1863), Milde (1862, 1864), Sendtner (1848) and many others, collected in the Tyrol (see Grims 1999). Further examples of bryological work in the region at that time are the publications of Hornschuch (1818), Bischoff (1823), Perktold (1844), Heufler (1851, 1860), Juratzka (1862), Sauter (1874, 1894), Leithe (1885), Jack (1898) and Warnstorf (1900).

By the end of the 19th and the beginning of the 20th century, bryology in the Tyrol reached a first culmination with the publication of “Die Moose (Bryophyta) von Tirol, Vorarlberg und Liechtenstein“ by Dalla Torre & Sarnthein (1904) within their series on the “Flora der Gefürsteten Grafschaft Tirol, des Landes Vorarlberg und des Fürstenthumes Liechtenstein”; therein also a vast bibliography on previous studies of bryophytes in the area. In the same year, Schiffner started his “bryological fragments”, a series of reports in which he also treated the Tyrolean bryophyte flora (Schiffner 1904). This was a very fruitful time with authors such as Litschauer (1903), Handel-Mazzetti (1904), Matouschek (e.g. 1902, 1903, 1905, 1907), Holler (1906), Loeske (1909),

Nicholson (1909), Kern (1912, 1913), Glowacki (1915), and others. Since that era some bryofloristic, phytogeographic and phytosociological-ecological investigations have been undertaken by Gams (e.g. 1932, 1939), Berger (1933), Bornmüller (1933), Grabherr (1941), Herzog (1944), Hagel (1970), Dunk (1973) and Smettan (1982), not to forget the important papers of Pitschmann & Reisingl (1954) and Reisingl & Pitschmann (1958).

An important milestone was the work of Düll (1991), who laid emphasis on the Pitztal, but conducted an extensive literature survey of whole Austrian and Italian Tyrol. Since then, the bryological studies continued in Tyrol (Maier 1992, Zechmeister 1994), but a timely country-wide survey was still lacking (see also Grims 1985 and Gärtner 1999). The most recent general overviews are given in the Austrian Moss Flora of Grims (1999) and the Austrian Horn- and Liverwort Flora of Köckinger (2017), but therein only the Austrian part of Tyrol is considered including extensive bibliographic details. Recent studies in North Tyrol are those of Buchner et al. (1993); in South Tyrol those of Kiem (1994, 1995) and Düll (2006) & Düll-Wunder (2012). Recent overviews of cryptogams, including bryophytes, were published by Gärtner (2010, 2013) and Gärtner & Hofbauer (2012). Bryophytes of spruce forests in South Tyrol were studied by Spitale (2015). In both North and South Tyrol recently so-called “Biodiversity days” lead to the publication of local lists (e.g. Düll-Wunder

2006, 2007; Hofbauer 2007; Kiebacher & Mair 2015a, b).