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SUMMARIES OF DOCTOR'S THESES and of other Duth papers which might escape attention because of their mode of publication

M. M. SCHOOF-VAN PELT (1973): *Littorelletea. A study of the vegetation of some amphiphytic communities of Western Europe.* Thesis, Nijmegen, 216 pages.

SUMMARY

In this thesis the results are given of a study of the vegetation of moorland pools and similar waters in The Netherlands and adjacent regions.

The studied areas, The Netherlands, western France, Scotland, the Lake District in England and western Ireland, all have a more or less atlantic climate; it is characterized by high amounts of precipitation, most of it falling in summer and autumn, a relatively low mean annual temperature, a low temperature amplitude and a low number of days with frost.

In The Netherlands, Artois and Les Landes the pools are situated in pleistocene or holocene sands; in Brittany, Scotland, the Lake District and Ireland the pools and lakes are situated in bedrock of Precambrian or Palaeozoic age. The origin of the pools on The Netherlands is discussed in detail.

Most studied communities are to be found in small shallow pools with a sandy soil and a fluctuating water level. Generally the water in these pools is poor in nutrients.

The vegetation of the pools was studied with the methods of the Zurich-Montpellier School (Braun-Blanquet approach). The sample plot records or "relevés" have been synthetized in syntaxonomical matrices, called "vegetation tables". Water analyses have been executed in a number of sample plots.

The study was focused on those communities that are commonly regarded as belonging to the class Littorelletea. Seven associations were represented in the relevés made by the present author. Their syntaxonomy, synecology and synchorology are treated in detail in Chapter V. The Isoëto-Lobelietum is bound, to clear, oligotrophic water and a sand soil; the vegetation stays inundated the entire year. The Eleocharetum multicaulis is found in shallow, oligotrophic water on a sand soil which is covered with mud or organic matter in a number of cases. Most stands run dry in summer. The Pilularietum globuliferae is found in a complex habitat where the eutrophic and oligotrophic influences balance each other. The Eleocharetum acicularis is found in open spots in, usually eutrophilic, vegetation. The Samolo-Littorelletum occurs in pools of the coastal dune valleys. The typical representatives of the Sparganietum minimi are found in deep peat cuttings with an organic soil and water which is slightly enriched in nutrients. Transitions between this association and Potametea communities are frequently encountered. The Sphagno-Sparganietum augustifolii is found in deep, oligotrophic water on an organic soil, in sheltered sites. Blowing sands are frequently observed in the vicinity of the stands.

The associations have been arranged into three alliances; the alliances have been classified into two orders.

In Chapter VI the distribution and ecology of some character taxa of Littorelletea syntaxa are treated.

Chapter VII gives a survey of the improverishment of the flora and vegetation of moorland pools in The Netherlands during the last 35 years. Comparisons were made with the aid of relevés made by W. Diemont and S. Sissingh between 1936 and 1943, and by S.O.L. (Stichting Onderzoek Levensgemeenschappen) investigators between 1957 and 1959.

In most moorland pools the characteristic vegetation either had completely disappeared or had become strongly impoverished. Only in strictly isolated pools the vegetation had remained broadly the same.

The thesis is available on request at the author's address: Dr. M. M. Schoof-van Pelt, De Wieken 11, Malden (Gld.).