

G. Hagedorn, G. Deml, M. Burhenne, T. Gräfenhan

Federal Biological Research Center for Agriculture and Forestry

Institute for Plant Virology, Microbiology and Biological Safety, Königin-Luise-Straße 19, D-14195 Berlin

Introduction

The **GLOPP-LIT** project focuses on capturing published or unpublished scientific information on plant pathogenic fungi. Scientists working in the particular fields of biodiversity will guarantee the high quality standard of the database. In the framework of the collaborative GLOPP project the literature project provides a base layer of information for the identification of plant pathogenic fungi that is supplemented with more detailed information from the projects working on specific groups. Eventually, scientists will not only be able to search for specific parasite-host-interactions, also a literature reference and geographic relations are given.

Results

The most important publication on plant pathogenic fungi for Europe [1] has been fully captured in a database containing more than 11 200 records. Unfortunately, this publication does not provide any information on literature references or other resources used in its compilation. It thus has to be supplemented from index cards and manuscripts provided to the project by Dr. Brandenburger. The original references on index cards have been scanned, partly transcribed, and indexed in a networked database (7600 references). The manuscript (comprising 12 binders) and personal communications are currently ran through to connect the references with the host-parasite observations. Approximately half of the work has been finished up to now.

In addition two unpublished manuscripts on the *Erysiphales* (powdery mildews, fig. 2) and the *Peronosporales* (downy mildews) are currently edited in cooperation with Dr. Brandenburger and converted to structured documents. Based on an XML-like mark-up, they will ultimately be converted to a relational database and integrated into the GLOPP information system.

Other publications [2-9] have been prepared for conversion into a database. The remaining time of the project will be necessary to finish the conversion and integration of these sources. Subsequently specialists of the fungal groups will improve the quality level of the data.

Erysiphe circaeae L. Junell
 (1 = *Erysiphe communis* f. *circaeae*
 (2 = *Erysiphe cichoracearum* p. p.
 (3 = *Erysiphe polygoni*)

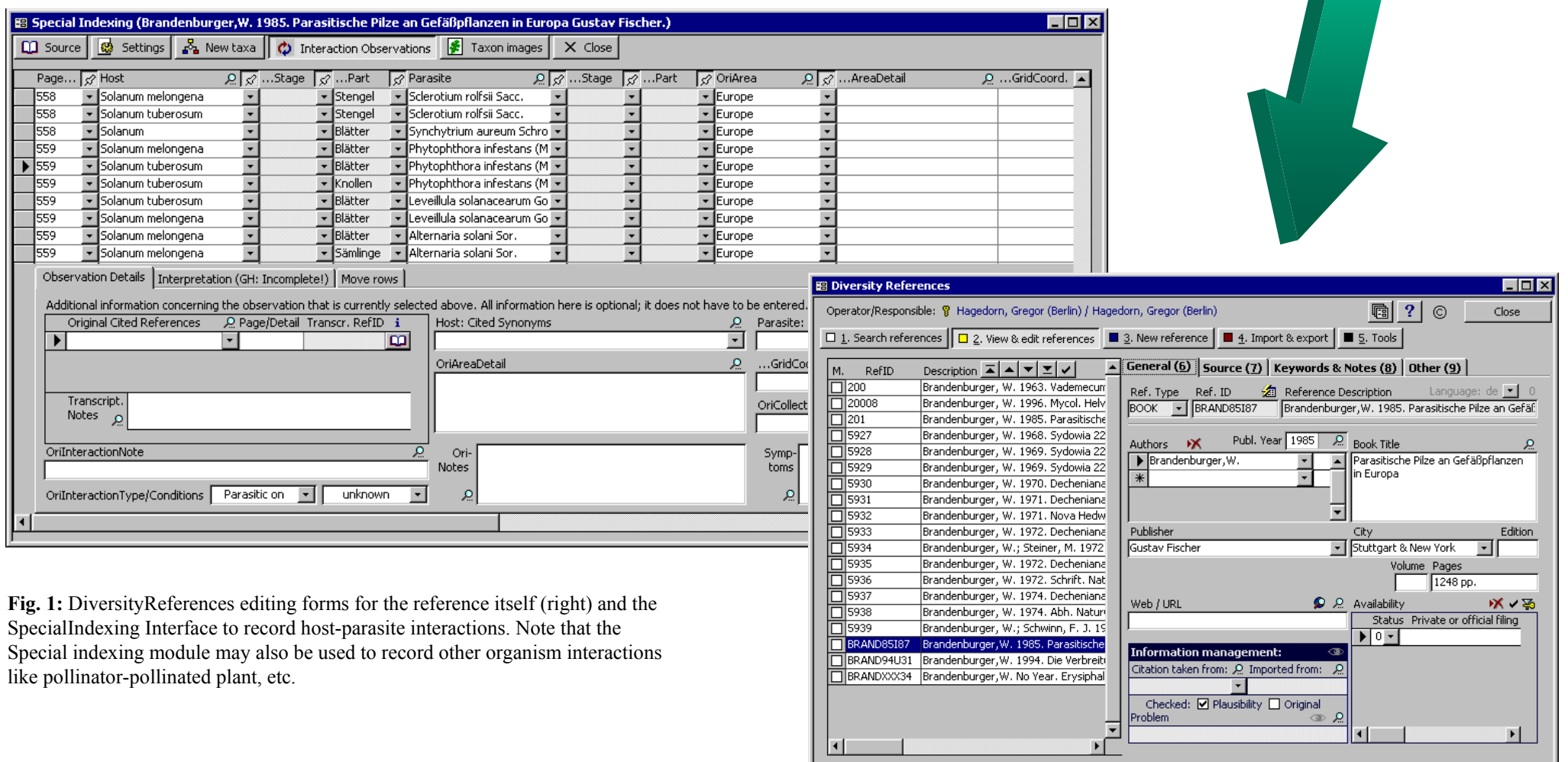
an Circaeae lutetiana L.

SH: Friedrichsruh - 10.1937 - Buhr 1958,33 (1 f. - 2428/3
 Kappeln/Schlei - s.oft - Fuchs 1888,13 (1 - 1325/2

MV: Gnitz: N Neuendorf - 8.1988 - Jage - Scholler 1996,114 - 1949/3
 Göhren: Nordperd - 8.1992 - mit T - Scholler 1996,114 - 1648/4
 Groß Lüsewitz - 9.,10.1953 - mit T - Buhr 1958,32 (1 f.

frequency fungus name ⇨ reference (cf. synonyms)
 literature reference incl. page
 coordinates of the TK25 map
 federal state collection date teleomorph found collector

Fig. 2: Plant parasite record from one of the manuscript by Dr. Brandenburger. The information is identified using named style tags, which are displayed in different colours, allowing the correction of mark-up mistakes.



The figure shows two software interfaces. The top interface is 'Special Indexing (Brandenburger, W. 1985. Parasitische Pilze an Gefäßpflanzen in Europa Gustav Fischer.)'. It features a table with columns for Page, Host, Stage, Part, Parasite, OriArea, AreaDetail, and GridCoord. The bottom interface is 'Diversity References', showing a list of references with columns for M, RefID, and Description. It also includes fields for Ref. Type, Ref. ID, Reference Description, Authors, Publ. Year, Book Title, Publisher, City, Edition, Volume, Pages, Web / URL, Availability, and Information management options like 'Checked: Plausibility Original Problem'.

Fig. 1: DiversityReferences editing forms for the reference itself (right) and the SpecialIndexing Interface to record host-parasite interactions. Note that the Special indexing module may also be used to record other organism interactions like pollinator-pollinated plant, etc.

References: 1. Brandenburger, W. 1985: Parasitische Pilze an Gefäßpflanzen in Europa, Stuttgart. – 2. Amano, K. (Hirata) 1986: Host range and geographical distribution of the powdery mildew fungi. – 3. Braun, U. 1995: The powdery mildews (*Erysiphales*) of Europe, Jena. – 4. Bierlein, J. 1993: Mehltaupilze (*Peronosporales*, *Erysiphales*). Regensburger Mykol. Schriften, 2. – 5. Brandenburger, W. 1994: Die Verbreitung der in den westlichen Ländern der Bundesrepublik Deutschland beobachteten Rostpilze (*Uredinales*). Regensburger Mykol. Schriften, 3. – 6. Flachs, K. 1931: Krankheiten und Parasiten der Zierpflanzen, Stuttgart. – 7. Gerlach, W. and Nirenberg, H. 1982: The genus *Fusarium* – a pictorial atlas. Mitteilungen aus der Biologischen Bundesanstalt für Land- und Forstwirtschaft, 209. – 8. Gruber, M. 1993: *Uredinales*. Regensburger Mykol. Schriften, 2. – 9. Pantidou, M. E. 1973: Fungus-host index for Greece, Athens, Kiphissia.