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Checklist of rust fungi in Turkey

ZELIHA BAHCECIOGLU* & SANLI KABAKTEPE

*zeliha.bahcecioglu@inonu.edu.tr, sanli.kabaktepe@inonu.edu.tr

Department of Biology, Faculty of Science and Art, Inonu University, TR 44280, Malatya–TURKEY

ABSTRACT — This study presents a checklist of rust fungi (*Uredinales*) of Turkey together with their known host plants. The checklist enumerates 351 species of rust fungi belonging to 26 genera and 9 families. Including 778 host plants belonging to 325 genera and 63 families. A host index is also provided.

KEY WORDS — rust fungi, Turkey, checklist.

Introduction

Rust fungi (*Uredinales*) are the most important obligate biotrophic plant parasitic group of Basidiomycota. These fungi comprise more than 7000 species in the world (Kirk et al. 2008) and parasitize a wide range of host plants, including ferns, conifers and angiosperms. As a group, these fungi are noted for their virulence, causing great losses to crops on a worldwide basis, as well as for their host specificity. The rust fungi have three unique features: 1. Up to five or six morphologically and functionally different spore states exist in the life cycle of a single species. 2. Many species need two unrelated host plants to complete their life cycle (heteroecious life cycle), although others can complete their life cycle on a single host species (autoecious life cycle). 3. Species usually have narrow and specific host ranges (Cummins & Hiratsuka 2003).

Turkey is a large peninsula situated between south-eastern Europe and Asia and its land surface is about 780,000 km². Turkey comprises different phytogeographic regions, the Euro-Siberian, Irano-Turanian and the Mediterranean region. Due to the countries topographical and climatic diversity the flora is rich and counts approximately 10.000 vascular plant species. Many genera have their centre of diversity in Turkey and the flora shows a high level of endemism in general (Davis 1965–88; Davis et al. 1988).

Research related to the rust fungi began with Magnus, Bornmüller and Bremer in the 1890s–1940s (Magnus 1899; Bremer et al. 1947, 1952). These studies were followed by studies of Karel, Göbelez and Henderson (Karel 1958; Gobelez 1962; Henderson 1957, 1959, 1961, 1964).

Studies about rust fungi in Turkey were intensified between the years 1970–1990 (Dinc & Karaca 1975; Gurcan 1976; Karaboz & Oner 1982; Oran 1972; Oner et al. 1974; Oner & Ekmekci 1974; Selik 1972; 1973; Tamer &

Oner 1978, 1978a, 1978b, Tamer et al. 1987, 1989; Ucar & Oner M. 1977, 1989; Vural 1976.).

During the last years a large number of new species records and new species have been added (Bahçecioglu 1998, 2001; Bahçecioglu & Isiloglu 1995; Bahçecioglu & Yildiz B. 1996, 2001, 2005; Bahçecioglu et al. 2006; Demirci et al. 1997; Erdogdu et al. 2010; Guven & Tamer 1993; Huseyin 2004, 2004; Huseyin & Karahan 2005; Huseyin & Selcuk 2000a,b, 2001, 2004; Huseyin et al. 2004; Kabaktepe & Bahçecioglu 2005; 2006; Kirbag 2004; Onan & Saydam 1995; Parlak & Gucin 1993; Pekel & Azaz 2003; Sert 2009; Sert & Sumbul 2005; Sert et al. 2004a, b; Soylu et al. 2004; Tamer & Altan 1995, 1995; Tamer et al. 1990a,b, 1992, 1997, Tunalı et al. 2004, 2006; Bahçecioglu & Gjaerum 2003, 2004; Bahçecioglu et al. 2005, 2009; Huseyin & Kirbag 2003; Kirbag et al. 2001, 2011).

This checklist provides the first comprehensive overview of the rust fungi in Turkey. It also facilitates access to the scattered Turkish literature on the topic that may not be readily available to the student of Turkish microfungi.

Materials and methods

The checklist was based on published literature about rust fungi in Turkey and own data. The current names of fungi are given according to www.indexfungorum.org. Names of host plants and families are given according to <http://www.ipni.org>.

Rust families, genera, species and subspecies are listed alphabetically followed by the host plant names, host family and related references. The anamorph genera *Aecidium* and *Uredo* follow the teleomorph genera.

Results and Discussion

A total of 351 species of rust fungi were identified in Turkey. They belong to nine families and 26 genera. The largest genera are *Puccinia* (202 species, 10 varieties), *Uromyces* (74 species, 1 variety), *Phragmidium* (15 species) and *Melampsora* (12 species, 2 varieties) (Table 1).

The recorded rusts were found on 778 host species that belong to 325 genera and 63 families (Davis 1965–88; Davis et al. 1988).

Table 1. Species numbers and numbers of rust-host combinations of families and genera of *Uredinales* found in Turkey

Taxa	Number of species	Number of rust-host combinations
<i>Coleosporiaceae</i>		
<i>Coleosporium</i>	5	25
<i>Cronartiaceae</i>		
<i>Cronartium</i>	1	2
<i>Endocronartium</i>	1	2
<i>Melampsoraceae</i>		
<i>Melampsora</i>	12	50
<i>Phakopsoraceae</i>		
<i>Cerotelium</i>	1	1
<i>Phragmidiaceae</i>		
<i>Arthuriomyces</i>	1	1
<i>Frommeella</i>	1	1
<i>Kuehneola</i>	1	2
<i>Phragmidium</i>	15	46
<i>Trachyspora</i>	1	5
<i>Xenodochus</i>	1	1
<i>Pileolariaceae</i>		
<i>Pileolaria</i>	1	4
<i>Pucciniaceae</i>		
<i>Cumminsiella</i>	1	1
<i>Endophyllum</i>	1	1
<i>Gymnosporangium</i>	9	44
<i>Puccinia</i>	203	686
<i>Uromyces</i>	74	227
<i>Zaghouania</i>	1	1
<i>Pucciniastraceae</i>		
<i>Hyalopsora</i>	1	1
<i>Melampsorella</i>	2	4
<i>Melampsoridium</i>	3	3
<i>Pucciniastrum</i>	5	7
<i>Uropyxidaceae</i>		
<i>Ochropsora</i>	1	1
<i>Tranzschelia</i>	2	13
<i>Incertae sedis</i>		
<i>Aecidium</i>	6	7
<i>Uredo</i>	1	1

There are some suspect records in this checklist. Although *Phragmidium bulbosum* (Fr.) Schldl., *Uromyces polygoni* Peck and *Uromyces vesicatorius* (Bubák) Nattrass were recorded on *Rosa* sp, *Pistacia* sp. (Göbelez 1962), *Lens* sp. (Bremer 1947; Göbelez 1962), real hosts of *Phragmidium bulbosum* are *Rubus* sp., *Uromyces polygoni* are *Polygonum* sp. and *Uromyces vesicatorius* are *Leontice* sp. and *Leonotis* sp.

List of Taxa

Coleosporiaceae

Coleosporium asterum (Dietel) Syd. & P. Syd.

Solidago virgaurea L. (*Asteraceae*) (Kabaktepe 2010).

Coleosporium datisciae Tranzschel

Datisca cannabina L. (*Datisceae*) (Henderson 1961; Kabaktepe 2010).

Coleosporium inulae Rabenh.

Asteriscus aquaticus Less. (*Asteraceae*) (Bremer et al. 1952).

Chrysophthalmum dichotomum Boiss. & Heldr. (*Asteraceae*) (Henderson 1961).

Inula aucheriana DC. (*Asteraceae*) (Kabaktepe 2010).

Inula viscosa (L.) Aiton (Kabaktepe 2010).

Coleosporium telekiaae Thum.

Telekia speciosa Baumg. (*Asteraceae*) (Kabaktepe & Bahçecioglu 2005, 2006; Kabaktepe 2010).

Coleosporium tussilaginis (Pers.) Kleb.

Campanula L. (*Campanulaceae*) (Kabaktepe & Bahçecioglu 2006; Kabaktepe 2010).

Campanula athoa Boiss. & Heldr. (Bremer et al. 1952 as *Coleosporium campanulae* (Pers.) Lév.).

Campanula glomerata L. (Kabaktepe & Bahçecioglu 2006; Kabaktepe 2010).

Campanula lactiflora M. Bieb. (Kabaktepe & Bahçecioglu 2006).

Campanula lyrata Lam. (Tamer & Oner 1978a as *C. campanulae*).

Campanula olympica Boiss. (Bahçecioglu & Yıldız 2005 as *C. campanulae*).

Campanula rapunculoides L. (Bremer et al. 1947; Göbelez 1962 as *C. campanulae*).

Euphrasia hirtella Jord. ex Reut. (*Scrophulariaceae*) (Kabaktepe & Bahçecioglu 2005, 2006 as *C. euphrasiae* (Schumach.) G. Winter).

Euphrasia pectinata Ten. (Kabaktepe 2010).

Michauxia campanuloides L'Hér. ex Ait. (*Campanulaceae*) (Bahcecioglu et al. 2006).

Michauxia tchihatcheffii Fisch. & Heldr. (Bahcecioglu et al. 2006).

Pedicularis comosa L. (*Scrophulariaceae*) (Henderson 1964).

Rhinanthus angustifolius C.C. Gmel. (*Scrophulariaceae*) (Kabaktepe 2010).

Rhinanthus minor L. (Henderson 1964).

Rhynchosorys elephas Griseb. (*Scrophulariaceae*) (Kabaktepe 2010).

Senecio aquaticus Hill (*Asteraceae*) (Kabaktepe 2010).

Senecio orientalis Mill. (Henderson 1964).

Tussilago farfara L. (*Asteraceae*) (Bahcecioglu & Yıldız 2005; Bahcecioglu et al. 2006; Kabaktepe & Bahcecioglu 2006; Kabaktepe 2010; Tunali et al. 2004).

Cronartiaceae

Cronartium quercuum (Berk.) Miyabe ex Shirai

Quercus L. (*Fagaceae*) (Henderson 1964 as *Uredo quercus* Brond.).

Quercus coccifera L. (Sert et al. 2004a).

Endocronartium pini (Willd.) Y. Hirats.

Pinus nigra Aiton (*Pinaceae*) (Selik 1972 as *Cronartium pini* (Willd.) Jørst.)

Pinus sylvestris L. (Bremer et al. 1952 as *Peridermium pini* (Willd.) Lév.)

Melampsoraceae

Melampsora allii-populina Kleb.

Populus alba L. (*Salicaceae*) (Bahcecioglu et al. 2006).

Populus nigra L. (Bahcecioglu & Isiloglu 1995; Bahcecioglu et al. 2006; Gurcan 1976; Tamer & Oner 1978a; Ucar & Oner 1977).

Populus tremula L. (Kabaktepe 2010).

Melampsora apocyni Tranzschel

Trachomitum venetum L. (*Apocynaceae*) (Kirbag 2004).

Melampsora epitea Thum. var. *epitea*

Euonymus L. (*Celastraceae*) (Henderson 1964).

Salix L. (*Salicaceae*) (Henderson 1961, 1964).

Melampsora euphorbiae (Ficinus & C. Schub.) Castagne

Euphorbia L. (*Euphorbiaceae*) (Demirci et al. 1997; Kabaktepe & Bahcecioglu 2006; Kabaktepe 2010; Oner et al. 1974, 1984; Tamer & Altan 1995).

Euphorbia altissima Boiss. (Bahcecioglu & Isiloglu 1995, Bahcecioglu & Yıldız 2001; Bahcecioglu et al. 2006)

- Euphorbia cardiophylla* Boiss. & Heldr. (Bahçecioglu & Yıldız 2005)
Euphorbia cheiradenia Boiss. & Hohen. (Bahçecioglu & Isiloglu 1995, Bahçecioglu & Yıldız 2001; Tamer et al. 1990b).
Euphorbia falcata L. (Bahçecioglu & Isiloglu 1995; Bahçecioglu et al. 2006; Gobelez 1962).
Euphorbia helioscopia L. (Bahçecioglu et al. 2006; Bremer et al. 1952; Karaboz & Oner 1982; Tamer & Oner 1978a).
Euphorbia macroclada Boiss. (Bahçecioglu & Yıldız 2005; Ekici et al. 2010; Erdogdu et al. 2010; Oner et al. 1984; Tamer et al. 1990b).
Euphorbia orientalis L. (Bahçecioglu & Isiloglu 1995, Bahçecioglu & Yıldız 2001)
Euphorbia pepus L. (Bahçecioglu & Yıldız 2001; Gobelez 1962)
Euphorbia petiolata Soland. (Bahçecioglu & Isiloglu 1995, Bahçecioglu & Yıldız 2001).
Euphorbia rigida Loisel. (Kavak 2004).
Euphorbia taurinensis All. (Karaboz & Oner 1982)
Euphorbia tinctoria Boiss. & Huet ex Boiss. (Bremer et al. 1947, 1952; Gobelez 1962).
Euphorbia virgata Waldst. & Kit. (Bahçecioglu & Isiloglu 1995, Bahçecioglu & Yıldız 1996, 2001, 2005; Bahçecioglu et al. 2006; Kabaktepe & Bahçecioglu 2006; Pekel & Azaz 2003; Tamer et al. 1989).
- Melampsora euphorbiae-dulcis*** G.H. Otth
Euphorbia heteradena Jaub. & Spach (*Euphorbiaceae*) (Tamer et al. 1990b).
Euphorbia virgata Waldst. & Kit. (Tamer et al. 1990b).
- Melampsora hypericorum*** (DC.) J. Schröt.
Hypericum L. (*Clusiaceae*) (Henderson 1961).
Hypericum androsaemum L. (Kabaktepe & Bahçecioglu 2006).
Hypericum crispum L. (Bremer et al. 1952; Gobelez 1962).
Hypericum empetrifolium Willd. (Tamer & Oner 1978a).
Hypericum lydiium Boiss. (Kabaktepe 2010).
Hypericum perforatum L. (Tamer et al. 1987).
- Melampsora lini*** (Ehrenb.) Lév. var. *lini*
Linum L. (*Linaceae*) (Demirci et al. 1997; Henderson 1959, 1961; Oner et al. 1974).
Linum hirsutum DC. (Kabaktepe 2010).
Linum mucronatum Bertol. (Erdogdu et al. 2010).
Linum nervosum Waldst. & Kit. (Kabaktepe 2010).
Linum nodiflorum L. (Kabaktepe & Bahçecioglu 2006; Tamer et al. 1992).

Linum usitatissimum L. (Bremer et al. 1947; 1952; Gobelez 1962; Karel 1958; Kabaktepe 2010).

Melampsora magnusiana G.H. Wagner

Papaver rhoeas L. (*Papaveraceae*) (Kirbag 2004).

Melampsora occidentalis H.S. Jacks.

Populus pyramidalis Salisb. (*Salicaceae*) (Oner & Ekmekci 1974).

Melampsora populnea (Pers.) P. t.

Pinus brutia Ten. (*Pinaceae*) (Selik 1972 as *Melampsora pinitorqua* Rostr.).

Pinus halepensis Mill. (Selik 1972 as *M. pinitorqua*).

Pinus nigra Aiton (Selik 1972 as *M. pinitorqua*).

Pinus pinaster Aiton (Selik 1972 as *M. pinitorqua*).

Populus L. (Selik 1972 as *M. pinitorqua*).

Populus nigra L. (Vural 1976).

Melampsora pulcherrima Maire

Populus alba L. (Vural 1976).

Melampsora salicis-albae Kleb.

Salix L. (*Salicaceae*) (Oner & Ekmekci 1974; Tamer et al. 1987).

Salix alba L. (Bahcecioglu & Isiloglu 1995, Bahcecioglu & Yıldız 2005; Bahcecioglu et al. 2006; Ekici et al. 2010; Kabaktepe & Bahcecioglu 2006; Kabaktepe 2010; Tamer & Oner 1978a).

Salix babylonica L. (Bahcecioglu & Isiloglu 1995; Bahcecioglu et al. 2006).

Salix caprea L. (Bahcecioglu et al. 2006; Kabaktepe 2010).

Salix cinerea L. (Bahcecioglu & Isiloglu 1995; Bahcecioglu & Yıldız 2001, 2005; Bahcecioglu et al. 2006; Kabaktepe 2010).

Salix pseudomedemii E.L. Wolf (Bahcecioglu & Isiloglu 1995)

Salix triandra L. (Bahcecioglu & Isiloglu 1995, Bahcecioglu & Yıldız 2001; Tamer et al. 1990b).

Phakopsoraceae

Cerotelium fici (Castagne) Arthur

Ficus carica L. (*Moraceae*) (Huseyin & Selcuk 2004).

Phragmidiaceae

Arthuriomyces peckianus (Howe) Cummins & Y. Hirats.

Rubus sanctus Schreb. (*Rosaceae*) (Huseyin et al. 2004 as *Gymnoconia peckiana* (Howe) Trotter).

Frommeella tormentillae (Fuckel) Cummins & Y. Hirats.

Potentilla L. (*Rosaceae*) (Bahçecioglu & Gjaerum 2004).

Kuehneola uredinis (Link) Arthur

Rubus canescens DC. (*Rosaceae*) (Huseyin 2004).

Rubus caesius L. Trabzon (Huseyin 2004).

Phragmidium acuminatum (Fr.) Cooke

Rubus L. (*Rosaceae*) (Kabaktepe & Bahçecioglu 2005, 2006).

Rubus canescens DC. (Kabaktepe 2010).

Phragmidium bulbosum (Fr.) Schltdl.

Rosa sulphurea Ait. (*Rosaceae*) (Gobelez 1962 as *Teloconia rosae* (Barclay) Syd.).

Footnote: *P. bulbosum* is parasite of *Rubus* sp. There is no record showing that *P. bulbosum* is parasite on *Rosa* except Gobelez (1962).

Rubus L. (*Rosaceae*) (Bremer et al. 1947, 1952; Gobelez 1962; Karel 1958 as *Phragmidium rubi* (Pers.) G. Winter).

Rubus sanctus Schreb. (Bahçecioglu 2001, Bahçecioglu & Yıldız 2005; Ekici et al. 2010; Kabaktepe 2010).

Phragmidium circumvallatum Magnus

Geum heterocarpum Boiss. (*Rosaceae*) (Henderson 1964).

Phragmidium fragariae G. Winter

Potentilla L. (*Rosaceae*) (Henderson 1959).

Fragaria vesca L. (*Rosaceae*) (Bahçecioglu et al. 2006; Kabaktepe & Bahçecioglu 2006; Kabaktepe 2010).

Phragmidium hendersonii Bahc. & Kabakt.

Potentilla L. (*Rosaceae*) (Bahçecioglu et al. 2005).

Phragmidium kamtschatkae (Anders) Arthur & Cummins

Rosa foetida Herrm. (*Rosaceae*) (Henderson 1964).

Phragmidium mucronatum (Pers.) Schltdl.

Rosa L. (*Rosaceae*) (Bremer et al. 1947 as *Phragmidium subcorticium* (Schrank) G. Winter; Demirci et al. 1997; Guven & Tamer 1993; Oner & Ekmekci 1974; Tamer & Oner 1978a; Ucar & Oner 1977).

Rosa canina L. (Bahçecioglu & Isiloglu 1995, Bahçecioglu & Yıldız 2001, 2005; Bahçecioglu et al. 2006; Ekici et al. 2010; Erdogdu et al. 2010; Kabaktepe & Bahçecioglu 2006; Kabaktepe 2010; Parlak & Gucin 1993; Pekel & Azaz 2003; Tamer et al. 1989; Tamer et al. 1990b).

Rosa dumalis Bechst. (Bahçecioglu & Isiloglu 1995, Bahçecioglu & Yıldız 2001, 2005).

Rosa foetida J.Herm. (Kabaktepe & Bahçecioglu 2006; Kabaktepe 2010).

Rosa horrida Spreng. (Bahçecioglu et al. 2006).

Rosa pimpinellifolia L. (Bahçecioglu & Isiloglu 1995, Bahçecioglu & Yıldız 2005; Bahçecioglu et al. 2006; Kabaktepe & Bahçecioglu 2006).

Rosa pulverulenta M. Bieb. (Bahcecioglu & Isiloglu 1995, Bahcecioglu & Yıldız 2001).

Rosa villosa L. (Bahcecioglu & Isiloglu 1995, Bahcecioglu & Yıldız 2001).

Phragmidium potentillae (Pers.) P. t.

Potentilla L. (*Rosaceae*) (Gobelez 1962; Henderson 1964).

Potentilla argentea L. (Kabaktepe 2010).

Potentilla aucheriana Th. Wolf ex Bornm. (Bahcecioglu & Isiloglu 1995).

Potentilla crantzii (Crantz) Fritsch (Kabaktepe 2010).

Potentilla erecta Hampe (Bahcecioglu et al. 2006).

Potentilla inclinata Vill (Tamer et al. 1989).

Potentilla recta L. (Bahcecioglu & Isiloglu 1995, Bahcecioglu & Yıldız 2001, 2005; Kabaktepe & Bahcecioglu 2006; Kabaktepe 2010).

Potentilla reptans L. (Kabaktepe 2010).

Potentilla speciosa Willd. (Kabaktepe 2010).

Phragmidium rosae-pimpinellifoliae Dietel

Rosa pimpinellifolia L. (*Rosaceae*) (Kabaktepe 2010).

Phragmidium rubi-idaei (DC.) P. t.

Rubus idaeus L. (*Rosaceae*) (Kabaktepe 2010).

Phragmidium rubi-saxatilis Liro

Rubus canescens DC. var. *canescens* (*Rosaceae*) (Bahcecioglu & Yıldız 2005).

Phragmidium sanguisorbae (DC.) J. Schröt.

Sanguisorba L. (*Rosaceae*) (Erdogdu et al. 2010).

Sanguisorba minor Scop. (Bahcecioglu & Isiloglu 1995, Bahcecioglu & Yıldız 1996, Bahcecioglu & Yıldız 2001, 2005; Bahcecioglu et al. 2006; Kabaktepe 2010; Karaboz & Oner 1982; Tamer & Altan 1995).

Sarcopoterium spinosum Spach (*Rosaceae*) (Tamer & Oner 1978a, 1978b).

Phragmidium sarcopoterii Gjaerum & Bahc.

Sarcopoterium spinosum Spach (*Rosaceae*) (Bahcecioglu & Gjaerum 2004).

Phragmidium tuberculatum Jul. Mull.

Rosa L. (*Rosaceae*) (Bahcecioglu et al. 2006; Bremer et al. 1947, 1952; Kabaktepe & Bahcecioglu 2006; Karel 1958)

Rosa dumalis Bechst. (Bahcecioglu & Yıldız 2005).

Rosa montana DC. (Kabaktepe 2010).

Rosa villosa L. subsp. *villosa* (Bahcecioglu & Yıldız 2005).

Rosa pulverulenta M. Bieb. (Bahcecioglu & Yıldız 2005).

Phragmidium violaceum (Schultz) G. Winter

Rubus L. (*Rosaceae*) (Bremer et al. 1947, 1952; Gobelez 1962; Karel 1958; Oner & Ekmekci 1974).

Rubus caesius L. (Kabaktepe 2010).

Rubus canescens DC. (Bahcecioglu & Isiloglu 1995, Bahcecioglu & Yıldız 2001; Bahcecioglu et al. 2006; Kabaktepe & Bahcecioglu 2006).

Rubus discolor Weihe & Nees (Bahcecioglu & Isiloglu 1995, Bahcecioglu & Yıldız 2001; Bahcecioglu et al. 2006; Kabaktepe 2010; Tamer & Oner 1978a).

Rubus fruticosus L. (Oner & Ekmekci 1974; Oner et al. 1974; Ucar & Oner 1977).

Rubus hirtus Waldst. & Kit. (Kabaktepe & Bahcecioglu 2006).

Rubus sanctus Schreb. (Bahcecioglu & Isiloglu 1995, Bahcecioglu & Yıldız 2001; Bahcecioglu et al. 2006; Oner et al. 1984).

Trachyspora intrusa (Grev.) Arthur

Alchemilla L. (*Rosaceae*) (Henderson 1964; Tamer & Altan 1995).

Alchemilla barbatiflora Juz. (Bahcecioglu & Gjaerum 2004).

Alchemilla holocycla Rothm. (Bahcecioglu & Yıldız 2005)

Alchemilla mollis (Buser) Rothm. (Bahcecioglu & Gjaerum 2004).

Alchemilla pseudocartalinica Juz. (Kabaktepe 2010; Tamer et al. 1989).

Xenodochus carbonarius Schldtl.

Sanguisorba officinalis L. (*Rosaceae*) (Kabaktepe 2010).

Pileolariaceae

Pileolaria terebinthi Castagne

Pistacia L. (*Anacardiaceae*) (Bahcecioglu et al. 2006).

Pistacia lentiscus L. (Bremer et al. 1947; Karel 1958 as *Uromyces terebinthi* (DC.) G. Winter)

Pistacia terebinthus Mill. (Bremer et al. 1947; Erdogdu et al. 2010; Gobelez 1962; Karel 1958; Tamer & Oner 1978a as *U. terebinthi*; Oner & Ekmekci 1974; Oner et al. 1984).

Pistacia vera L. (Bremer et al. 1947; Karel 1958 as *U. terebinthi*).

Pucciniaceae

Cumminsiella mirabilissima (Peck) Nannf.

Mahonia aquifolium Nutt. (*Berberidaceae*) (Huseyin E. 2004).

Endophyllum sempervivi (Alb. & Schwein.) de Bary

Sempervivum globiferum L. (*Crassulaceae*) (Henderson 1964).

Gymnosporangium amelanchieris E. Fisch. ex F. Kern

Amelanchier rotundifolia M. Roem. (*Rosaceae*) (Bahcecioglu 2001, Bahcecioglu & Yıldız 2005).

Gymnosporangium clavariiforme (Jacq.) DC.

Amelanchier rotundifolia M. Roem. (*Rosaceae*) (Bahcecioglu et al. 2006).

Cotoneaster nummularius Fisch. & C. A. Mey. (*Rosaceae*) (Henderson 1957).

Crataegus L. (*Rosaceae*) (Bahcecioglu & Yıldız 2005; Gobelez 1962; Gurcan 1976; Guven & Tamer 1993; Selik 1972; Tamer & Altan 1995).

Crataegus aronia Bosc (Bahcecioglu et al. 2006).

Crataegus azoralus L. (Oner & Ekmekci 1974).

Crataegus microphylla K. Koch (Kabaktepe 2010).

Crataegus monogyna Jacq. subsp. *monogyna* (Karel 1958; Oner & Ekmekci 1974; Oner et al. 1974, 1984; Tamer et al. 1987).

Crataegus orientalis M. Bieb. (Bahcecioglu et al. 2006; Dervis et al. 2010).

Juniperus oxycedrus L. (*Cupressaceae*) (Selik 1972).

Juniperus drupacea Labill. (Selik 1972).

Juniperus excelsa M. Bieb. (Selik 1972).

Juniperus foetidissima Willd. (Selik 1972).

Malus sylvestris Mill. (*Rosaceae*) (Bahcecioglu et al. 2006).

Mespilus germanica L. (*Rosaceae*) (Karel 1958).

Pyrus syriaca Boiss. (*Rosaceae*) (Bahcecioglu et al. 2006).

Gymnosporangium confusum Plowr.

Cotoneaster Medik. (*Rosaceae*) (Bahcecioglu et al. 2006).

Cotoneaster melanocarpus Fisch. ex Loud. (Kabaktepe 2010).

Cotoneaster vulgaris Lindl. (Bremer et al. 1952; Karel 1958).

Crataegus L. (*Rosaceae*) (Bahcecioglu & Yıldız 2005; Bremer et al. 1947; Logway 1964; Oner et al. 1984).

Crataegus monogyna Jacq. subsp. *monogyna* (Bahcecioglu & Yıldız 2005; Bremer et al. 1947; Dervis et al. 2010; Ekici et al. 2010; Erdogdu et al. 2010; Gobelez 1962; Selik 1972).

Crataegus pentagyna Waldst. & Kit. ex Wild. (Bahcecioglu & Yıldız 2005).

Crataegus szowitsii Pojark (Bahcecioglu & Yıldız 2005).

Crataegus tanacetifolia (Lam.) Pers. (Bahcecioglu & Yıldız 2005)

Cydonia vulgaris Pers. (*Rosaceae*) (Bremer et al. 1947; Gobelez 1962; Kabaktepe 2010).

Juniperus oxycedrus L. (*Cupressaceae*) (Bremer et al. 1952; Karel 1958; Logway 1964).

Mespilus germanica L. (*Rosaceae*) (Bremer et al. 1947, 1952; Gobelez 1962; Kabaktepe 2010; Karel 1958; Selik 1972).

Gymnosporangium cornutum Arthur ex F. Kern

Juniperus communis L. (*Cupressaceae*) (Erdogdu et al. 2010).

Sorbus aucuparia Poir. (*Rosaceae*) (Huseyin & Selcuk 2001).

Sorbus umbellata Fritsch (Bahcecioglu & Yıldız 1996).

Gymnosporangium fuscum Oerst.

Pyrus communis L. (*Rosaceae*) (Bahcecioglu et al. 2006).

Gymnosporangium gaeumannii H. Zogg

Juniperus nana Willd. (*Cupressaceae*) (Ucar & Oner 1977).

Gymnosporangium juniperi Link

Sorbus subfusca Boiss. (*Rosaceae*) (Huseyin & Selcuk 2000).

Gymnosporangium sabiniae (Dicks.) G. Winter

Juniperus excelsa M. Bieb. (*Cupressaceae*) (Dinc & Karaca 1975 as *Gymnosporangium fuscum* DC.).

Juniperus nana Willd. (Dinc & Karaca 1975 as *G. fuscum*; Gobelez 1962; Selik 1972).

Juniperus oxycedrus L. (Bremer et al. 1952).

Pyrus communis L. (*Rosaceae*) (Bremer et al. 1947, 1952; Dinc & Karaca 1975; Dervis et al. 2010; Guven & Tamer 1993; Selik 1972; Oner et al. 1984; Parlak & Guvin 1993 as *G. fuscum*).

Pyrus elaeagnifolia Pall. (Dinc & Karaca 1975; Oner et al. 1984 as *G. fuscum*; Kabaktepe 2010).

Gymnosporangium tremelloides R. Hartig

Malus Mill. (*Rosaceae*) (Guven & Tamer 1993).

Malus sylvestris Mill. (Kabaktepe 2010).

Pyrus communis L. (*Rosaceae*) (Erdogdu et al. 2010).

Pyrus malus L. (Bremer et al. 1947, 1952; Gobelez 1962; Karel 1958).

Sorbus aria (L.) Crantz (*Rosaceae*) (Bremer et al. 1947).

Sorbus aucuparia L. (Kabaktepe 2010).

Puccinia absinthii DC.

Artemisia austriaca Jacq. (*Asteraceae*) (Bahcecioglu 2001, Bahcecioglu & Yıldız 2005)

Artemisia absinthium L. (Bahcecioglu 2001, Bahcecioglu & Yıldız 2005)

Artemisia taurica Willd. (Bahcecioglu 2001, Bahcecioglu & Yıldız 2005)

Tanacetum balsamita L. (*Asteraceae*) (Bahcecioglu & Yıldız 2005)

Puccinia acarnae P.Syd. & Syd.

Picnomon acarna (L.) Cass. (*Asteraceae*) (Bahcecioglu & Yıldız 2005; Bremer et al. 1952; Ekici et al. 2010; Erdogdu et al. 2010; Gobelez 1962; Kabaktepe 2010; Tamer et al. 1997).

Puccinia acetosae Barclay

Rumex L. (*Polygonaceae*) (Oner & Ekmekci 1974; Tamer & Altan 1995).

Rumex acetosa L. (Kabaktepe 2010).

Rumex acetosella L. (Bahcecioglu & Yıldız 2005; Bahcecioglu et al. 2006; Oner & Ekmekci 1974).

Rumex patientia L. (Kabaktepe 2010).

Rumex scutatus L. (Bahcecioglu & Isiloglu 1995, Bahcecioglu & Yıldız 2001; Kabaktepe 2010).

Rumex tmoleus Boiss. (Bremer et al. 1947; Gobelez 1962).

Rumex tuberosus L. (Bahcecioglu & Yıldız 2005; Tamer et al. 1992; Tamer & Oner 1978a).

Puccinia achilleae Cooke

Achillea biebersteinii Afanasiev (*Asteraceae*) (Kabaktepe 2010).

Achillea cucullata (Hauskn.) Bornm. (Bahcecioglu & Yıldız 2005).

Achillea gonioccephala Boiss. & Balansa (Bahcecioglu et al. 2006).

Achillea millefolium L. (Bahcecioglu & Yıldız 2005; Kabaktepe & Bahcecioglu 2006).

Achillea phrygia Boiss. & Bal. (Bahcecioglu & Yıldız 2005).

Achillea santolina L. (Henderson 1959).

Achillea sintenisii Hub.-Mor. (Bahcecioglu & Yıldız 2005).

Achillea sipikorensis Hauskn. & Bornm. (Bahcecioglu & Yıldız 2005).

Achillea teretifolia Willd. (Bahcecioglu & Yıldız 2005)

Achillea wilhelmsii C.Koch (Bahcecioglu & Yıldız 2005; Bahcecioglu et al. 2006).

Puccinia acroptili P. Syd. & Syd.

Acroptilon picris (Pall. ex Willd.) DC. (*Asteraceae*) (Bremer et al. 1952; Gobelez 1962; Tamer et al. 1997).

Acroptilon repens (L.) DC. (Demirci et al. 1997).

Puccinia aethionematis Koshk.

Aethionema iberideum Boiss. (*Brassicaceae*) (Bahcecioglu et al. 2006).

Puccinia allii Castagne

Allium L. (*Alliaceae*) (Bremer et al. 1947; Henderson 1964; Karaboz & Oner 1982; Oner & Ekmekci 1974; Tamer & Altan 1995; Tamer & Oner 1978a).

Allium ampeloprasum L. (Bremer et al. 1947; Gobelez 1962).

Allium cepa L. (Kabaktepe & Bahcecioglu 2006; Sagir & Ulukus 1982).

Allium neapolitanum Cirillo (Tamer & Oner 1978a).

Allium rotundum L. (Tamer & Oner 1978a).

Allium sativum L. (Bahcecioglu et al. 2006; Kabaktepe 2010).

Puccinia alyssi Lindr.

Alyssum minutum Schlecht. ex DC. (*Brassicaceae*) (Tamer et al. 1987).

Puccinia anatolica Gassner

Vinca herbacea Waldst. & Kit. (*Apocynaceae*) (Bremer et al. 1947; Karel 1958; Gobelez 1962).

Puccinia ankarensis Petr.

Lactuca L. (*Asteraceae*) (Henderson 1961).

Lactuca viminea C.B. Clarke (Bremer et al. 1952; Gobelez 1962).

Puccinia annularis (F. Strauss) G. Winter

Teucrium chamaedrys L. (*Lamiaceae*) (Bahcecioglu et al. 2006; Erdogdu et al. 2010; Kabaktepe & Bahcecioglu 2006; Kabaktepe 2010; Tamer et al. 1987, 1990a).

Teucrium divaricatum Sieber ex Heldr. (Tamer & Oner 1978b).

Teucrium polium L. (Bahcecioglu & Isiloglu 1995, Bahcecioglu & Yildiz 2001, 2005; Bahcecioglu et al. 2006; Kabaktepe & Bahcecioglu 2006).

Puccinia antirrhini Dietel & Holw.

Antirrhinum majus L. (*Scrophulariaceae*) (Güven & Tamer 1993; Gobelez 1962; Oner & Ekmekci 1974; Ucar & Oner 1977).

Puccinia apii Desm.

Apium graveolens L. (*Apiaceae*) (Bahcecioglu et al. 2006; Kabaktepe 2010).

Puccinia arabidis-conringioidis Maire

Arabis graellsiiiformis Hedge (*Brassicaceae*) (Henderson 1959).

Puccinia ardahanensis R. Berndt, Bahç. & S. Kabaktepe

Veronica armena Boiss. & Huet (*Scrophulariaceae*) (Bahcecioglu et al. 2009; Kabaktepe 2010).

Puccinia arenariae (Schumach.) J. Schröt.

Cerastium purpurascens Adams (*Caryophyllaceae*) (Tamer et al. 1989).

Sagina L. (*Caryophyllaceae*) (Henderson 1964).

Silene L. (*Caryophyllaceae*) (Kabaktepe 2010).

Silene italica (L.) Pers (Bahcecioglu & Yildiz 2005).

Silene rhynhocarpa Boiss. (Bahcecioglu et al. 2006).

Silene vulgaris (Moench) Garcke var. *vulgaris* (Kabaktepe & Bahcecioglu 2006).

Puccinia aristolochiae (DC.) G. Winter

Aristolochia L. (*Aristolochiaceae*) (Henderson 1964; Tamer & Altan 1995).

Aristolochia maurorum L. (Gobelez 1962).

Puccinia asparagi DC.

Asparagus officinalis L. (*Liliaceae*) (Bahcecioglu & Yıldız 2005; Kabaktepe 2010).

Asparagus verticillatus L. (Bahcecioglu & Yıldız 2005).

Puccinia asperulae-aperines Picbauer

Asperula L. (*Rubiaceae*) (Bahcecioglu & Yıldız 2005).

Asperula pestalazzae Boiss. (Bahcecioglu & Yıldız 2005).

Puccinia asperulina (Juel) Lagerh.

Galium mite Boiss. & Hohen. (*Rubiaceae*) (Tamer & Altan 1995).

Puccinia asphodeli Moug.

Asphodelus microcarpus Rchb. (*Asphodelaceae*) (Bremer et al. 1947; Gobelez 1962; Henderson 1964; Oner & Ekmekci 1974; Tamer & Oner 1978a).

Puccinia asteris Schwein.

Aster amellus L. (*Asteraceae*) (Henderson 1964).

Puccinia asyneumatis Bahc. & Kabakt.

Asyneuma amplexicaule Hand.-Mazz. (*Campanulaceae*) (Bahcecioglu et al. 2005).

Puccinia ballotae D.M. Hend.

Ballota rotundifolia K.Koch (*Lamiaceae*) (Kabaktepe 2010).

Ballota saxatilis Guss. (Henderson 1959).

Puccinia balsamitae (F. Strauss) Rabenh.

Tanacetum balsamita L. (*Asteraceae*) (Kabaktepe 2010).

Tanacetum balsamitoides Sch. Bip. (Bahcecioglu et al. 2006).

Tanacetum cilicicum (Boiss.) Grierson (Bahcecioglu et al. 2006).

Puccinia behenis G.H. Otth

Silene L. (*Caryophyllaceae*) (Bahcecioglu et al. 2006).

Silene alba Muhl. ex Rohrb. (Kabaktepe 2010).

Silene arguta Fenzl (Bahcecioglu & Isiloglu 1995, Bahcecioglu & Yıldız 2001).

Silene odontopetala Fenzl (Tamer & Altan 1995).

Puccinia betonicae (Alb. & Schwein.) DC.

Stachys L. (*Lamiaceae*) (Bahcecioglu et al. 2006).

Stachys annua L. (Kabaktepe 2010).

Stachys iberica M. Bieb. (Bahcecioglu & Yıldız 2005).
Stachys citrina Boiss. & Heldr. (Bahcecioglu & Yıldız 2005).
Stachys cretica L. (Kabaktepe 2010).
Stachys grandiflora Benth. (Henderson 1964).

Puccinia bistortae (F. Strauss) DC.

Polygonum bellardii All. (*Polygonaceae*) (Kabaktepe 2010).
Polygonum bistorta L. (Tamer et al. 1989).
Polygonum lapathifolium L. (Kabaktepe 2010).

Puccinia bithynica Magnus

Salvia cryptantha Montbret & Aucher ex Benth. (*Lamiaceae*) (Henderson 1957).

Puccinia brachypodii var. *poae-nemoralis* (G.H. Otth) Cummins & H.C. Grene

Berberis L. (*Berberidaceae*) (Henderson 1964 as *Puccinia poae-nemoralis* G.H. Otth)
Poa nemoralis L. (*Poaceae*) (Tamer et al. 1989 as *P. poae-nemoralis*).

Puccinia bromina Erikss.

Bromus japonicus Thunb. (*Poaceae*) (Bahcecioglu 2001, Bahcecioglu & Yıldız 2005)
Bromus sterilis L. (Bahcecioglu 2001, Bahcecioglu & Yıldız 2005).

Puccinia buharica Jacz.

Zoegea lepturea L. (*Asteraceae*) (Bahcecioglu & Isiloglu 1995, Bahcecioglu & Yıldız 2001; Tamer et al. 1987).

Puccinia bulbocastani (Cumina) Fucckel

Bunium L. (*Apiaceae*) (Bahcecioglu & Yıldız 2005; Henderson 1964; Tamer et al. 1989).

Puccinia bupleuri (Opiz) Rudolphi

Bupleurum L. (*Apiaceae*) (Bremer et al. 1952; Henderson 1959, 1964 as *Puccinia bupleuri-falcati* (DC.) G. Winter; Tamer et al. 1997).

Bupleurum subovatum Spreng. (Bremer et al. 1952; Gobelez 1962 as *P. bupleuri-falcati*).

Bupleurum croseum Fenzl (Bahcecioglu & Yıldız 2005).

Bupleurum falcatum L. (Bahcecioglu & Yıldız 2005).

Bupleurum rotundifolium L. (Bahcecioglu & Yıldız 2005).

Puccinia buxi DC.

Buxus sempervirens L. (*Buxaceae*) (Gobelez 1962).

Puccinia calcitrapae DC.

Arctium lappa L. (*Asteraceae*) (Demirci et al. 1997 as *Puccinia bardanae* (Wallr.) Corda).

Arctium minus (Hill) Bernh. (Bahcecioglu & Isiloglu 1995, Bahcecioglu & Yıldız 2001; Bahcecioglu et al. 2006; Kabaktepe & Bahcecioglu 2006; Kabaktepe 2010; Tamer & Altan 1995).

Carduus L. (*Asteraceae*) (Demirci et al. 1997; Ucar & Oner 1977).

Carduus acanthoides L. (Bahcecioglu & Yıldız 2005 as *Puccinia carduorum* Jacky).

Carduus apenninus Jan ex DC. (Kabaktepe 2010).

Carduus lanuginosus Willd. (Pekel & Azaz 2003).

Carduus nutans L. (Bahcecioglu & Yıldız 2001, 2005; Kabaktepe 2010; Tamer et al. 1987, 1990a; Tamer & Oner 1978a as *P. carduorum*; Bahcecioglu et al. 2006)

Carduus pycnocephalus L. (Bahcecioglu & Isiloglu 1995, Bahcecioglu & Yıldız 2005 as *P. carduorum*; Bahcecioglu et al. 2006; Demirci et al. 1997 as *Puccinia cardui-pycnocephali* P. Syd. & Syd.; Ekici et al. 2010; Kabaktepe & Bahcecioglu 2006; Kabaktepe 2010; Karaboz & Oner 1982; Tamer & Altan 1995).

Carlina foliosa Boiss. & Hausskn. (*Asteraceae*) (Bahcecioglu et al. 2006).

Carlina oligocephala Boiss. & Kotschy (Bahcecioglu & Yıldız 1996; Bahcecioglu et al. 2006; Tamer et al. 1990b as *Puccinia carlinae* Jacky).

Centaurea L. (*Asteraceae*) (Güven & Tamer 1993; Henderson 1959; Tamer & Altan 1995).

Centaurea aggregata Fisch. & Mey. (Bahcecioglu & Isiloglu 1995, Bahcecioglu & Yıldız 1996, Bahcecioglu & Yıldız 2001).

Centaurea cheirolopha (Fenzl) Wagenitz (Bahcecioglu et al. 2006).

Centaurea depressa M. Bieb. (Kabaktepe 2010).

Centaurea glastifolia L. (Bahcecioglu & Yıldız 2005).

Centaurea iberica Trevir. ex Spreng. (Bahcecioglu et al. 2006; Kabaktepe & Bahcecioglu 2006; Kabaktepe 2010; Oner et al. 1984; Tamer et al. 1987).

Centaurea kotschyi (Boiss. & Heldr.) Hayek (Bahcecioglu & Yıldız 2005).

Centaurea kurdica Reichardt (Tamer et al. 1990b).

Centaurea macrocephala Puschk. ex Willd. (Kabaktepe 2010).

Centaurea polypodiifolia Boiss. (Bahcecioglu & Isiloglu 1995, Bahcecioglu & Yıldız 2001).

Centaurea pulchella Ledeb. (Tamer et al. 1990b).

Centaurea salicifolia M. Bieb. ex Willd. (Tamer et al. 1989).

Centaurea solstitialis L. (Bahcecioglu & Isiloglu 1995, Bahcecioglu & Yıldız 2001, 2005; Bahcecioglu et al. 2006 Karaboz & Oner 1982; Tamer & Oner 1978a; Ucar & Oner 1977).

Centaurea tomentella Hand.-Mazz. (Bahçecioglu & Isiloglu 1995, Bahçecioglu & Yıldız 2001).

Centaurea urvillei DC. (Bahçecioglu et al. 2006).

Centaurea virgata Lam. (Bahçecioglu & Isiloglu 1995; Bahçecioglu & Yıldız 2005; Tamer et al. 1990a).

Cirsium acarna (L.) Moench (*Asteraceae*) (Oner et al. 1974).

Cirsium arvense (L.) Scop. (Bahçecioglu & Yıldız 2005 as *Puccinia cirsii* Lasch.; Bahçecioglu et al. 2006; Kabaktepe & Bahçecioglu 2006; Oner et al. 1984).

Cirsium canum (L.) All. (Oner et al. 1984).

Cirsium haussknechtii Boiss. (Bahçecioglu et al. 2006).

Cirsium lappacearum (M. Bieb.) M. Bieb. (Bahçecioglu & Yıldız 2005 as *P. cirsii*: Bahçecioglu et al. 2006).

Cirsium macrobotris (C. Koch) Boiss. (Bahçecioglu & Yıldız 2005 as *P. cirsii*).

Cirsium rhizocephalum C. A. Mey. subsp. *sinuatum* (Boiss.) P.H.Davis & Paris (Tamer et al. 1990a).

Cirsium vulgare (Savi) Ten. (Bahçecioglu & Yıldız 2005 as *P. cirsii*).

Cousinia brachyptera DC. (*Asteraceae*) (Tamer et al. 1990a).

Echinops galaticus Freyn (*Asteraceae*) (Bahçecioglu & Gjaerum 2004; Bahçecioglu & Yıldız 2005 as *P. cirsii*; Kabaktepe & Bahçecioglu 2006).

Echinops melitenensis Hedge & Hub.-Mor. (Bahçecioglu & Gjaerum 2004; Bahçecioglu & Yıldız 2005 as *P. cirsii*).

Echinops pungens Trautv. var. *pungens* (Kabaktepe & Bahçecioglu 2006).

Echinops ritro L. (Bahçecioglu & Yıldız 2005 as *P. cirsii* Lasch.; Bahçecioglu et al. 2006; Kabaktepe 2010).

Lappa Scop. (*Asteraceae*) (Bremer et al. 1952; Gobelez 1962 as *Puccinia bardanae* (Wallr.) Corda)

Notobasis syriaca Cass. (*Asteraceae*) (Bahçecioglu et al. 2006; Karaboz & Oner 1982).

Picnomon acarna (L.) Cass. (*Asteraceae*) (Bahçecioglu et al. 2006).

***Puccinia calthae* Link**

Caltha polypetala Hochst. (*Ranunculaceae*) (Henderson 1964; Kabaktepe 2010; Tamer et al. 1997).

***Puccinia campanulae* Carmich.**

Campanula tridentata Schreb. (*Campanulaceae*) (Henderson 1964).

***Puccinia cancellata* (Durieu & Mont.) Sacc. & Roum.**

Juncus acutus L. (*Juncaceae*) (Henderson 1964).

***Puccinia caricicola* Fuckel**

Carex L. (*Cyperaceae*) (Kabaktepe 2010).
Carex atrata L. (Bahcecioglu & Yıldız 2005).
Carex hirta L. (Bahcecioglu & Yıldız 2005).
Carex hordeistichos Vill. (Bahcecioglu & Yıldız 2005).
Carex nigra (L.) Reichard (Bahcecioglu & Yıldız 2005).
Carex riparia Curtis (Bahcecioglu & Yıldız 2005).
Urtica dioica L. (*Urticaceae*) (Kabaktepe 2010).

Puccinia caricina* DC. var. *caricina

Carex L. (*Cyperaceae*) (Bahcecioglu & Gjaerum 2004; Bahcecioglu et al. 2006)
Carex hordeistichos Vill. (Bahcecioglu & Gjaerum 2003).

***Puccinia caricis-erigerontis* Arthur**

Erigeron acer L. subsp. *acer* (*Asteraceae*) (Tamer et al. 1987).

***Puccinia carthami* Corda**

Carthamus dentatus Vahl (*Asteraceae*) (Bahcecioglu et al. 2006; Tamer et al. 1987).
Carthamus persicus Willd. ex Boiss. (Tamer et al. 1992).
Carthamus tinctorius L. (Karel 1958; Gobelez 1962).
Centaurea pulcherrima Willd. (*Asteraceae*) (Kabaktepe 2010).
Centaurea virgata Beser (Kabaktepe 2010).

***Puccinia centaureae* H. Mart.**

Centaurea L. (*Asteraceae*) (Henderson 1964).
Centaurea aggregata DC. (Bahcecioglu & Yıldız 2005).
Centaurea consanguinea DC. (Bahcecioglu & Yıldız 2005).
Centaurea glastifolia L. (Bahcecioglu & Yıldız 2005).
Centaurea iberica Trev. ex Spreng. (Bahcecioglu & Yıldız 2005).
Centaurea polypodiifolia Boiss. (Bahcecioglu & Yıldız 2005).
Centaurea sivasica Wagenitz (Bahcecioglu & Yıldız 2005).
Centaurea solstitialis L. (Bremer et al. 1952; Gobelez 1962).
Centaurea virgata Lam. (Bahcecioglu & Yıldız 2005).

***Puccinia cerinthes-agropyrina* Tranzschel**

Cerinthe minor L. (*Boraginaceae*) (Pekel & Azaz 2003).

***Puccinia cesatii* J. Schröt.**

Andropogon hirtus L. (*Poaceae*) (Bremer et al. 1952; Gobelez 1962).
Bothriochloa ischaemum (L.) Keng (*Poaceae*) (Henderson 1964; Kabaktepe & Bahcecioglu 2006).

***Puccinia chaerophylli* Purton**

Anthriscus nemorosa Spreng. (*Apiaceae*) (Kabaktepe & Bahcecioglu 2006; Kabaktepe 2010; Oner & Ekmekci 1974; Tamer & Oner 1978a).

Chaerophyllum aureum L. (*Apiaceae*) (Kabaktepe 2010).

Chaerophyllum bulbosum L. (Bahçecioglu & Yıldız 1996; Kabaktepe 2010).

Chaerophyllum byzantinum Boiss. (Kabaktepe & Bahçecioglu 2006).

Chaerophyllum crinitum Boiss. (Tamer et al. 1990a).

Chaerophyllum macrospermum Fisch. & Mey. ex Hohen. (Bahçecioglu & Gjaerum 2004).

Daucus carota L. (*Apiaceae*) (Kabaktepe 2010).

Puccinia chamaedryos Ces.

Teucrium chamaedrys L. (*Lamiaceae*) (Henderson 1964).

Puccinia chondrillina Bubak

Chondrilla juncea L. (*Asteraceae*) (Bahçecioglu & Yıldız 2005; Bahçecioglu et al. 2006; Demirci et al. 1997; Gobelez 1962; Kabaktepe 2010; Tamer et al. 1989).

Puccinia chrysanthemi Roze

Achillea L. (*Asteraceae*) (Bahçecioglu & Yıldız 1996)

Achillea phrygia Boiss. & Balansa (Bahçecioglu & Isiloglu 1995, (Bahçecioglu & Yıldız 1996).

Chrysanthemum L. (*Asteraceae*) (Güven & Tamer 1993).

Puccinia circaeae Pers.

Circaea L. (*Onagraceae*) (Henderson 1964).

Circaea lutetiana L. (Kabaktepe & Bahçecioglu 2006).

Puccinia cirsii (DC.) Sacc.

Cirsium arvense (L.) Scop. (*Asteraceae*) (Parlak & Gücin 1993).

Puccinia cnici H. Mart.

Carduus L. (*Asteraceae*) (Oner & Ekmekci 1974).

Cirsium Mill. (*Asteraceae*) (Bahçecioglu & Isiloglu 1995, Bahçecioglu & Yıldız 2001).

Cirsium anatolicum (Petr.) Petr. ex Grossh. (Bremer et al. 1952; Gobelez 1962 as *Puccinia cirsii-eriophori* Jacky)

Cirsium arvense (L.) Scop. (Bahçecioglu et al. 2006).

Cirsium bracteosum DC. (Tamer & Altan 1995 as *P. cirsii-eriophori*).

Cirsium ciliatum Moench (Kabaktepe 2010).

Cirsium eriophorum Scop. (Bremer et al. 1947 as *P. cirsii-eriophori*)

Cirsium haussknechtii Boiss. (Bahçecioglu et al. 2006).

Cirsium lappaceum (M. Bieb.) Fischer (Bahçecioglu & Yıldız 2005; Bahçecioglu et al. 2006; Kabaktepe 2010).

Cirsium obvallatum M. Bieb. (Kabaktepe 2010).

Cirsium pubigerum (Desf.) DC. (Bahçecioglu & Yıldız 2005).

Cirsium vulgare (Savi) Ten. (Bahcecioglu et al. 2006; Kabaktepe & Bahcecioglu 2006).

Picnomon acarna (L.) Cass. (*Asteraceae*) (Oner et al. 1984 as *Puccinia cirsii-lanceolati* J. Schröt.; Tamer et al. 1987, 1990a).

***Puccinia cnici-oleracei* Pers.**

Achillea L. (*Asteraceae*) (Tamer & Altan 1995 as *Puccinia millefolii* Fuckel).

Achillea kotschyi Boiss. (Bahcecioglu et al. 2006).

Achillea phrygia Boiss. & Balansa (Oner et al. 1984 as *P. millefolii*).

Achillea tenuifolia Lam. (Kabaktepe 2010).

Aster amellus L. ssp. *ibericus* (Stev.) Avetian (*Asteraceae*) (Pekel & Azaz 2003).

***Puccinia conclusa* Thum.**

Cyperus rotundus L. (*Cyperaceae*) (Sert et al. 2004b).

***Puccinia conii* (F. Strauss) Fuckel**

Conium maculatum L. (*Apiaceae*) (Bahcecioglu & Isiloglu 1995; Gobeletz 1962).

***Puccinia convolvuli* (Pers.) Castagne**

Convolvulus L. (*Convolvulaceae*) (Henderson 1964).

Convolvulus arvensis L. (Bahcecioglu & Isiloglu 1995, Bahcecioglu & Yıldız 2001; Kabaktepe 2010).

Convolvulus sepium L. (Bremer et al. 1952; Gobeletz 1962).

***Puccinia constricta* (Lagerh.) Bubák**

Teucrium orientale L. (*Lamiaceae*) (Bahcecioglu & Gjaerum 2004; Bahcecioglu et al. 2006).

Teucrium polium L. (Bahcecioglu et al. 2006).

***Puccinia coronata* var. *avenae* W.P. Fraser & Ledingham**

Avena barbata Pott (*Poaceae*) (Kabaktepe 2010; Oner & Ekmekci 1974).

Avena sativa L. (Bremer et al. 1947; Gobeletz 1962 as *Puccinia coronifera* Kleb.; Karaboz & Oner 1982).

Avena sterilis L. (Bremer et al. 1947; Gobeletz 1962; Tamer & Oner 1978a as *P. coronifera*)

Bromus tomentosus Trin. (*Poaceae*) (Henderson 1964).

Frangula alnus Mill. (*Rhamnaceae*) (Huseyin & Selcuk 2001).

Polypogon monspeliensis (L.) Desf. (*Poaceae*) (Henderson 1964; Karaboz & Oner 1982; Tamer & Oner 1978a).

Rhamnus L. (*Rhamnaceae*) (Henderson 1964).

Rhamnus cathartica L. (Tamer et al. 1989).

Rhamnus pallasii Fisch. & Mey. (Kabaktepe 2010; Pekel & Azaz 2003).

Puccinia coronillae Woron.

Coronilla orientalis Miller (*Fabaceae*) (Bahcecioglu & Yıldız 2005; Kabaktepe & Bahcecioglu 2006).

Coronilla varia L. (Kabaktepe & Bahcecioglu 2006; Kabaktepe 2010).

Puccinia crepidis J. Schröt.

Crepis alpina L. (*Asteraceae*) (Bahcecioglu & Yıldız 2005).

Crepis foetida L. (Bahcecioglu & Yıldız 2005).

Puccinia crepidicola Syd. & P. Syd.

Crepis L. (*Asteraceae*) (Bahcecioglu & Isıoğlu 1995, Bahcecioglu & Yıldız 2001; Bahcecioglu et al. 2006).

Crepis alpina L. (Kabaktepe & Bahcecioglu 2006).

Crepis foetida L. (Bahcecioglu et al. 2006; Kabaktepe & Bahcecioglu 2006; Kabaktepe 2010).

Crepis sancta (L.) Bab. (Tamer et al. 1987).

Puccinia cressae Lagerh.

Cressa cretica L. (*Convolvulaceae*) (Oner & Ekmekci 1974; Tamer & Oner 1978a).

Puccinia cruciferarum F. Rudolphi

Cardamine impatiens L. (*Brassicaceae*) (Tamer et al. 1987).

Puccinia cyanii Pass.

Centaurea cheirolopha (Fenzl) Wagenitz (*Asteraceae*) (Bahcecioglu et al. 2006).

Centaurea ensiformis P.H.Davis (Henderson 1957).

Centaurea glastifolia L. (Kabaktepe 2010).

Centaurea iberica Trev. ex Spreng. (Bahcecioglu & Yıldız 2005; Bahcecioglu et al. 2006; Kabaktepe & Bahcecioglu 2006; Kabaktepe 2010).

Centaurea lycopifolia Boiss. & Kotschy ex Boiss. (Bahcecioglu et al. 2006).

Centaurea pichleri Boiss. (Bahcecioglu & Yıldız 2005).

Centaurea polypodiifolia Boiss. (Bahcecioglu & Yıldız 2005; Bahcecioglu et al. 2006).

Centaurea salicifolia M. Bieb. ex Willd. (Kabaktepe 2010).

Centaurea triumfettii All. (Bahcecioglu & Yıldız 2005).

Centaurea urvillei DC. (Bahcecioglu & Yıldız 2005; Bahcecioglu et al. 2006).

Centaurea virgata Lam. (Bahcecioglu & Yıldız 2005).

Puccinia cynodontis Lacroix ex Desm.

Cynodon dactylon var. *villosus* Regel (*Poaceae*) (Bahcecioglu & Yıldız 2005; Bahcecioglu et al. 2006; Gobelez 1962; Kabaktepe 2010; Tamer et al. 1987, 1992).

Plantago major L. (*Plantaginaceae*) (Ekici et al. 2010).

Mercurialis annua L. (*Euphorbiaceae*) (Tamer & Oner 1978a).

Viola odorata L. (*Violaceae*) (Bahcecioglu & Isiloglu 1995).

***Puccinia cyperi* Arthur**

Cyperus L. (*Cyperaceae*) (Bahcecioglu & Yıldız 2005; Kabaktepe & Bahcecioglu 2006; Oner & Ekmekci 1974).

Cyperus capitatus Vandelli (Kabaktepe 2010).

Eleocharis mitracarpa Steud. (*Cyperaceae*) (Tamer & Altan 1995).

Puccinia dioicae* Magnus var. *dioicae

Taraxacum F.H.Wigg. (*Asteraceae*) (Henderson 1957).

Carex atrata L. (*Cyperaceae*) (Bahcecioglu 2001; Bahcecioglu & Yıldız 2005).

***Puccinia dioicae* var. *silvatica* (J. Schröt.) D.M. Hend.,**

Senecio vernalis Waldst. & Kit. (*Asteraceae*) (Bahcecioglu & Yıldız 2005 as *Puccinia silvatica* J. Schröt.).

***Puccinia divergens* Bubak**

Carlina oligocephala Boiss. & Kotschy (*Asteraceae*) (Bahcecioglu 2001; Bahcecioglu & Yıldız 2005; Kabaktepe 2010).

Carlina vulgaris L. (Kabaktepe 2010).

***Puccinia echinopsis* DC.**

Echinops L. (*Asteraceae*) (Demirci et al. 1997; Henderson 1959; Tamer & Altan 1995).

Echinops ritro L. (Bahcecioglu & Isiloglu 1995, Gobelez 1962)

Echinops melitenensis Hedge & Hub.-Mor. (Bahcecioglu & Isiloglu 1995, Bahcecioglu & Yıldız 2001)

Echinops pungens Trautv. (Bahcecioglu & Isiloglu 1995; Tamer et al. 1992).

***Puccinia elymi* Westend.**

Elymus repens (L.) Gould (*Poaceae*) (Demirci et al. 1997; Tamer & Altan 1995).

***Puccinia eremuri* Kom.**

Eremurus M. Bieb. (*Asphodelaceae*) (Henderson 1959).

Eremurus spectabilis Ledeb. (Kabaktepe 2010).

***Puccinia eryngii* DC.**

Eryngium L. (*Apiaceae*) (Bahcecioglu et al. 2006; Bremer et al. 1952; Oner et al. 1984).

Eryngium billardierei Delar. (Bahcecioglu & Isiloglu 1995, Bahcecioglu & Yıldız 2001; Tamer et al. 1992).

Eryngium campestre L. (Bahcecioglu & Yıldız 2005; Bahcecioglu et al. 2006; Demirci et al. 1997; Ekici et al. 2010; Erdogdu et al. 2010; Gobelez 1962; Kabaktepe 2010; Karaboz & Oner 1982; Ucar & Oner 1977).

Puccinia falcariae (Pers.) Fuckel

Falcaria Fabr. (*Apiaceae*) (Bahcecioglu et al. 2006; Tamer & Altan 1995).

Falcaria rivini Host (Bremer et al. 1952; Gobelez 1962).

Falcaria vulgaris Bernh. (Bahcecioglu & Yıldız 2005; Demirci et al. 1997; Guven & Tamer 1993; Kabaktepe & Bahcecioglu 2006; Kabaktepe 2010).

Puccinia ferulae F. Rudolphi

Ferula orientalis L. (*Apiaceae*) (Kabaktepe 2010).

Ferulago longistylis Boiss. (*Apiaceae*) (Bahcecioglu & Yıldız 1996).

Puccinia festucae Plowr.

Festuca L. (*Poaceae*) (Henderson 1964 as *Uredo festucae* DC.).

Lonicera caucasica Pall. (*Caprifoliaceae*) (Huseyin & Selcuk 2000, 2001).

Puccinia frankeniae Link

Frankenia hirsuta L. (*Frankeniaceae*) (Henderson 1964; Tamer & Oner 1978a, 1978b).

Puccinia fuckelii Korn.

Jurinea aucheriana DC. (*Asteraceae*) (Bahcecioglu & Yıldız 1996, 2005; Bahcecioglu 1998).

Puccinia galii-cruciatae Duby

Cruciata laevipes Opiz (*Rubiaceae*) (Bahcecioglu & Yıldız 2005 as *Puccinia celakovskyana* Bub.).

Cruciata taurica (Pall.) Ehrend. (Bahcecioglu & Isiloglu 1995, Bahcecioglu & Yıldız 2001, 2005; Kabaktepe & Bahcecioglu 2006 as *P. celakovskyana*; Bahcecioglu et al. 2006; Kabaktepe 2010).

Galium verum L. (*Rubiaceae*) (Kabaktepe & Bahcecioglu 2006; Kabaktepe 2010).

Puccinia gentianae Rohl.

Gentiana cruciata L. (*Gentianaceae*) (Demirci et al. 1997; Kabaktepe 2010; Pekel & Azaz 2003).

Gentiana lutea L. (Pekel & Azaz 2003).

Gentiana septemfida Pall. (Kabaktepe 2010).

Puccinia geranii-silvatici P. Karst.

Geranium L. (*Geraniaceae*) (Güven & Tamer 1993; Tamer et al. 1997).

Geranium tuberosum L. (Gobelez 1962).

Puccinia gjaerumii Bahc. & Kabakt.

Bellardiochloa polychroa (Trautv.) Roshev. (*Poaceae*) (Bahcecioglu et al. 2005).

Puccinia gladioli Castagne

Gladiolus atrovioleaceus Boiss. (*Iridaceae*) (Bremer et al. 1952; Karel 1958).

Gladiolus kotschyanus Boiss. (Kabaktepe 2010).

Puccinia glechomatis DC.

Salvia euphratica Montbr. & Auch. (*Lamiaceae*) (Bahcecioglu & Isiloglu 1995, Bahcecioglu & Yıldız 1996, Bahcecioglu & Yıldız 2001).

Salvia rosifolia Sm. (Kabaktepe 2010).

Puccinia glomerata Grev.

Senecio eriospermus DC. (*Asteraceae*) (Bahcecioglu & Isiloglu 1995).

Senecio orientalis Mill. (Henderson 1964).

Puccinia glumarum J.C. Schmidt

Aegilops cylindrica Sibth. & Sm. (*Poaceae*) (Bremer et al. 1947; Gobelez 1962).

Aegilops ovata L. (Bremer et al. 1947; Gobelez 1962).

Bromus madritensis L. (*Poaceae*) (Bremer et al. 1952).

Hordeum murinum L. (*Poaceae*) (Bremer et al. 1947; Gobelez 1962).

Hordeum sativum Pers. (Bremer et al. 1947, 1952; Karel 1958).

Secale cereale L. (*Poaceae*) (Bremer et al. 1947; Karel 1958).

Triticum sativum Lam. (*Poaceae*) (Bremer et al. 1947, 1952; Karel 1958).

Puccinia gnaphalii (Speg.) Henn.

Inula L. (*Asteraceae*) (Henderson 1961).

Inula graveolens Desf. (Oner & Ekmekci 1974).

Inula viscosa (L.) Aiton (Oner & Ekmekci 1974; Oner et al. 1974).

Puccinia graminis Pers.

Aegilops speltoides Tausch (*Poaceae*) (Bahcecioglu & Yıldız 2005).

Aegilops umbellulata Zhunk. (Bahcecioglu & Yıldız 2005).

Agropyron repens (L.) P.Beauv. (*Poaceae*) (Bremer et al. 1947, 1952).

Alopecurus arundinaceus Poir. (*Poaceae*) (Bahcecioglu & Yıldız 2005).

Avena barbata Pott (*Poaceae*) (Bremer et al. 1947; Kabaktepe & Bahcecioglu 2006; Karaboz & Oner 1982; Oner et al. 1984).

- Avena sativa* L. (Bahçecioglu & Yıldız 2005).
Avena sterilis L. (Bremer et al. 1947).
Berberis L. (*Berberidaceae*) (Karel 1958; Henderson 1964).
Berberis crataegina DC. (Bahçecioglu & Isiloglu 1995, Bahçecioglu & Yıldız 2001, 2005; Bahçecioglu et al. 2006; Kabaktepe 2010).
Berberis vulgaris L. (Bahçecioglu & Yıldız 2005; Kabaktepe 2010; Oner & Ekmekci 1974).
Bromus L. (*Poaceae*) (Henderson 1964; Tamer et al. 1990b).
Bromus erectus Huds. (Karaboz & Oner 1982).
Bromus japonicus Thunb. (Bahçecioglu et al. 2006).
Bromus lanceolatus Roth (Bahçecioglu & Yıldız 2005; Kabaktepe & Bahçecioglu 2006).
Bromus sterilis L. (*Poaceae*) (Bahçecioglu et al. 2006; Kabaktepe & Bahçecioglu 2006; Karaboz & Oner 1982).
Bromus tectorum L. (Karaboz & Oner 1982).
Calamagrostis pseudophragmites (Haller f.) Koeler (*Poaceae*) (Bahçecioglu & Yıldız 2005).
Dactylis glomerata L. (*Poaceae*) (Bahçecioglu & Yıldız 2005; Bahçecioglu et al. 2006; Demirci et al. 1997; Kabaktepe & Bahçecioglu 2006; Kabaktepe 2010; Oner et al. 1984).
Elymus caput-medusae L. (*Poaceae*) (Bremer et al. 1947).
Elymus elongatus (Host) Runemark subsp. *turcicus* (McGuire) Melderis (Bahçecioglu & Yıldız 2005).
Elymus hispidus (Opiz) Melderis ssp. *hispidus* (Bahçecioglu & Yıldız 2005; Bahçecioglu et al. 2006; Kabaktepe & Bahçecioglu 2006; Kabaktepe 2010).
Elymus lazicus (Boiss.) Melderis subsp. *divaricatus* (Boiss. & Bal.) Melderis (Bahçecioglu & Yıldız 2005).
Elymus lazicus (Boiss.) Melderis subsp. *lazicus* (*Poaceae*) (Bahçecioglu & Yıldız 2005).
Elymus nodosus (Nevski) Melderis subsp. *gypsicolus* Melderis (Bahçecioglu & Yıldız 2005).
Elymus repens (L.) Gould subsp. *repens* (Bahçecioglu & Yıldız 2005; Guven & Tamer 1993; Kabaktepe 2010).
Eremopoa persica (Trin.) Roshev. (*Poaceae*) (Bahçecioglu & Yıldız 2005).
Festuca valesiaca Schleich. ex Gaudin (*Poaceae*) (Kabaktepe & Bahçecioglu 2006).
Hordeum L. (*Poaceae*) (Guyen & Tamer 1993; Henderson 1964; Kabaktepe & Bahçecioglu 2006).

- Hordeum bulbosum* L. (Bahcecioglu & Isiloglu 1995, Bahcecioglu & Yıldız 2001; Bahcecioglu et al. 2006; Kabaktepe & Bahcecioglu 2006; Kabaktepe 2010).
- Hordeum distichon* L. (Bahcecioglu & Yıldız 2005).
- Hordeum marinum* With. (Kabaktepe & Bahcecioglu 2006).
- Hordeum murinum* L. (Kabaktepe 2010).
- Hordeum sativum* Pers. (Bremer et al. 1947; Karel 1958).
- Lolium* L. (*Poaceae*) (Bahcecioglu et al. 2006; Henderson 1964; Kabaktepe & Bahcecioglu 2006).
- Lolium multiflorum* Lam. (Kabaktepe & Bahcecioglu 2006).
- Lolium persicum* Boiss. & Hohen. (Parlak & Gucin 1993).
- Lolium perenne* L. (Karaboz & Oner 1982; Tamer & Oner 1978a).
- Lolium rigidum* Gaudin (Kabaktepe & Bahcecioglu 2006; Kabaktepe 2010; Parlak & Gucin 1993).
- Melica ciliata* L. subsp. *ciliata* (*Poaceae*) (Bahcecioglu & Yıldız 2005).
- Phleum graecum* Boiss. & Heldr. (*Poaceae*) (Karaboz & Oner 1982).
- Phleum pratense* L. (Kabaktepe 2010).
- Phragmites australis* Cav. (*Poaceae*) (Bahcecioglu & Isiloglu 1995, Bahcecioglu & Yıldız 1996).
- Poa annua* L. (*Poaceae*) (Kabaktepe 2010).
- Poa longifolia* Trin. (Bahcecioglu & Yıldız 2005).
- Poa nemoralis* L. (Henderson 1964).
- Polypogon viridis* (*Poaceae*) (Gouan) Breistr. (Kabaktepe & Bahcecioglu 2006).
- Secale cereale* L. var. *cereale* (*Poaceae*) (Bahcecioglu & Yıldız 2005; Bahcecioglu et al. 2006; Kabaktepe & Bahcecioglu 2006).
- Secale cereale* var. *voronovii* (Grossh.) Mayss. (Bahcecioglu & Yıldız 2005).
- Secale montanum* Guss. (Bahcecioglu & Yıldız 2005).
- Setaria viridis* (L.) P.Beauv (*Poaceae*) (Kabaktepe & Bahcecioglu 2006).
- Triticum* L. (*Poaceae*) (Akan et Al. 2006; Bahcecioglu & Yıldız 2005; Karaboz & Oner 1982; Tamer & Altan 1995).
- Triticum aestivum* L. (Güven & Tamer 1993).
- Triticum carthlicum* Nevski (Parlak & Gucin 1993).
- Triticum dicoccon* Schrank (Bahcecioglu et al. 2006).
- Triticum sativum* Lam. (Bremer et al. 1947, 1952; Karel 1958; Oner et al. 1984).
- Triticum turgidum* L. (Bahcecioglu & Isiloglu 1995, Bahcecioglu & Yıldız 2001; Bahcecioglu et al. 2006; Kabaktepe 2010; Parlak & Gucin 1993).
- Triticum vulgare* Vill. (Bahcecioglu et al. 2006; Kabaktepe & Bahcecioglu 2006).

Puccinia gundeliae Cooke.

Gundelia tournefortii L. subsp. *tenuisecta* Willd. (*Asteraceae*) (Bahçecioğlu & Yıldız 2005; Bahçecioğlu et al. 2006; Henderson 1959; Kabaktepe 2010).

Puccinia hariotii Lagerh.

Stachys L. (*Lamiaceae*) (Henderson 1957).

Puccinia hedysari-obscuri DC.

Hedysarum pogonocarpum Boiss. (*Asteraceae*) (Bahçecioğlu & Isiloğlu 1995, Bahçecioğlu & Yıldız 1996, Bahçecioğlu & Yıldız 2001)

Hedysarum pycnostachyum Hedge & Hub.-Mor. (Bahçecioğlu & Isiloğlu 1995, Bahçecioğlu & Yıldız 2001)

Hedysarum rotundifolium Boiss. & Noë (Bahçecioğlu & Isiloğlu 1995, Bahçecioğlu & Yıldız 2001).

Puccinia heldreichiana Dietel

Asphodelus L. (*Asphodelaceae*) (Henderson 1957).

Puccinia helianthi Schwein.

Helianthus annuus L. (*Asteraceae*) (Bahçecioğlu et al. 2006; Bremer et al. 1947; Kabaktepe & Bahçecioğlu 2006; Kabaktepe 2010).

Xanthium strumarium L. (*Asteraceae*) (Oner et al. 1984).

Puccinia hendersonii Huseyin & Kirbag

Centaurea kurdica Reichardt (*Asteraceae*) (Kirbag et al. 2001).

Puccinia heraclei Grev.

Heracleum L. (*Apiaceae*) (Bahçecioğlu & Yıldız 1996, Bahçecioğlu 1998).

Heracleum trachyloma Fisch. & Mey. (Kabaktepe 2010).

Puccinia heterophyllae Cooke

Serratula cerinthifolia (Sibth. & Sm.) Boiss. (*Asteraceae*) (Erdogdu et al. 2010; Henderson 1957).

Puccinia hieracii (Rohl.) H. Mart. var. ***hieracii***

Acroptilon repens (L.) DC. (*Asteraceae*) (Bahçecioğlu et al. 2006; Bremer et al. 1947 as *Puccinia jaceae* G.H. Oth; Kabaktepe 2010).

Centaurea carduiformis DC. (*Asteraceae*) (Kabaktepe 2010).

Centaurea cheirolopha (Fenzl) Wagenitz (Bahçecioğlu et al. 2006).

Centaurea lycopifolia Boiss. & Kotschy ex Boiss. (Bahçecioğlu et al. 2006).

Centaurea macrocephala Puschk. ex Willd. (Kabaktepe 2010).

Centaurea mucronifera DC. (Bahçecioğlu et al. 2006).

Centaurea solstitialis L. (Bahçecioğlu et al. 2006).

Chondrilla juncea L. (*Asteraceae*) (Bahcecioglu & Isiloglu 1995 Oner et al. 1984).

Cichorium intybus L. (*Asteraceae*) (Bahcecioglu et al. 2006; Bremer et al. 1947; Demirci et al. 1997; Guven & Tamer 1993 as *Puccinia cichorii* (DC.) Bellyneck; Karaboz & Oner 1982; Oner et al. 1984).

Cichorium pumilum Jacq. (Bahcecioglu & Isiloglu 1995; Bahcecioglu & Yıldız 2005 as *P. cichorii*).

Hieracium L. (*Asteraceae*) (Kabaktepe & Bahcecioglu 2006; Kabaktepe 2010).

Hieracium olympicum Boiss. (Tamer et al. 1989).

Hieracium pannosum Boiss. (Bahcecioglu & Yıldız 2005; Bahcecioglu et al. 2006; Tamer et al. 1987).

Inula aucheriana DC. (*Asteraceae*) (Kabaktepe 2010).

Picris hieracioides L. (*Asteraceae*) (Bahcecioglu & Isiloglu 1995, Bahcecioglu 2001; Bahcecioglu & Yıldız 2005 as *Puccinia picridis* Hazsl.; Kabaktepe 2010).

Picris pauciflora Willd. (Bahcecioglu 2001; Bahcecioglu & Yıldız 2005 as *P. picridis*; Karaboz & Oner 1982).

Picris strigosa M. Bieb. (Bahcecioglu & Isiloglu 1995, Bahcecioglu 2001; Bahcecioglu & Yıldız 2005 as *P. picridis*)

Serratula cerinthifolia (Sibth. & Sm.) Boiss. (*Asteraceae*) (Bahcecioglu & Isiloglu 1995)

Serratula oligocephala DC. (Bahcecioglu & Isiloglu 1995, Bahcecioglu & Yıldız 1996; Bahcecioglu et al. 2006).

Serratula radiata M. Bieb. (Kabaktepe 2010).

Taraxacum F.H.Wigg. (*Asteraceae*) (Bahcecioglu et al. 2006; Bremer et al. 1952; Demirci et al. 1997; Erdogdu et al. 2010; Guven & Tamer 1993; Kabaktepe & Bahcecioglu 2006; Kabaktepe 2010; Oner et al. 1984).

Taraxacum assemani C.I.Blanche ex Boiss. (Bahcecioglu et al. 2006).

Taraxacum bessarabicum (Hornem.) Hand.Mazz. (Bahcecioglu & Yıldız 2005 as *Puccinia taraxaci* Plowr.).

Taraxacum montanum (C.A.Mey.) DC. (Bahcecioglu & Yıldız 2005; Tamer et al. 1990a as *P. taraxaci*).

Taraxacum officinale Weber (Ekici et al. 2010).

Taraxacum serotinum (Waldst. & Kit.) Poiret (Bahcecioglu & Yıldız 2005 as *P. taraxaci*).

Taraxacum syriacum Boiss. (Bahcecioglu & Yıldız 2005).

Puccinia hieracii* var. *piloselloidarum (Probst) Jørst.

Pilosella Hill (*Asteraceae*) (Bahcecioglu et al. 2006).

Pilosella auriculoides (Láng) P.D.Sell & C.West (Bahcecioglu & Gjaerum 2004; Bahcecioglu et al. 2006; Tamer et al. 1987).

Pilosella fallax Arv.-Touv. (Bahcecioglu & Isiloglu 1995).

Pilosella piloselloides (Vill.) Sojak (Kabaktepe 2010).

Pilosella verruculata (Link) Soják (Bahcecioglu & Gjaerum 2004).

Puccinia holboellii (Hornem.) Rostr.

Erysimum repandum L. (*Brassicaceae*) (Tamer et al. 1987).

Puccinia hordei G.H.Otth

Hordeum L. (*Poaceae*) (Bahcecioglu et al. 2006).

Hordeum bulbosum L. (Bahcecioglu et al. 2006; Kabaktepe 2010).

Hordeum distichon L. (Bahcecioglu & Yıldız 2005; Parlak & Gucin 1993).

Hordeum sativum Pers. (Bremer et al. 1947; Karel 1958 as *Puccinia simplex* (Korn.) Erikss. & Henning).

Hordeum vulgare L. (Kavak 2004).

Holcus setiglumis Boiss. & Reut. (*Poaceae*) (Bremer et al. 1952 as *Puccinia holcina* Erikss.; Gobelez 1962).

Lolium L. (*Poaceae*) (Henderson 1957).

Triticum aestivum L. (*Poaceae*) (Güven & Tamer 1993).

Puccinia hystereum Rohl.

Rhagadiolus angulosus (Jaub. & Spach) Kupicha (*Asteraceae*) (Tamer et al. 1990b).

Rhagadiolus stellatus DC. (Oner et al. 1974; Tamer et al. 1992).

Tragopogon L. (*Asteraceae*) (Demirci et al. 1997; Güven & Tamer 1993).

Tragopogon aureus Boiss. (Bahcecioglu & Yıldız 2005 as *Puccinia tragopogi* (Pers.) G.Winter; Kabaktepe & Bahcecioglu 2006; Kabaktepe 2010; Tamer et al. 1989).

Tragopogon latifolius Boiss. (Bremer et al. 1947; Gobelez 1962 as *P. tragopogi*).

Puccinia hysteriiformis Peck

Minuartia recurva Schinz & Thell (*Caryophyllaceae*) (Kabaktepe 2010).

Puccinia imperatae (Magnus) G. Poirault

Imperata cylindrica (L.) P.Beauv. (*Poaceae*) (Bremer et al. 1952; Gobelez 1962).

Puccinia iridis Wallr.

Iris L. (*Iridaceae*) (Bahcecioglu & Yıldız 2005).

Iris sari Scott ex Baker (Kabaktepe & Bahcecioglu 2006).

Iris taochia Woronow ex Grossh. (Henderson 1964; Pekel & Azaz 2003; Tamer & Altan 1995).

Puccinia isiacae (Thum.) G. Winter

Lepidium draba L. (*Brassicaceae*) (Bremer et al. 1947; Gobelez 1962).

Myagrum perfoliatum L. (*Brassicaceae*) (Bremer et al. 1947).

Puccinia jasmini DC.

Jasminum fruticans L. (*Oleaceae*) (Bahcecioglu & Isiloglu 1995; Bahcecioglu et al. 2006; Ekici et al. 2010; Erdogan et al. 2010; Gobelez 1962; Kabaktepe & Bahcecioglu 2006; Oner et al. 1984; Tamer et al. 1990a; Tamer & Oner 1978a; Ucar & Oner 1977).

***Puccinia jurineae* Cooke**

Jurinea L. (*Asteraceae*) (Henderson 1957).

***Puccinia lactucarum* P. Syd.**

Cephalorrhynchus tuberosus (Steven) Schchian (*Asteraceae*) (Bahcecioglu et al. 2006).

Lactuca L. (Bahcecioglu et al. 2006).

Scariola F.W.Schmidt (*Asteraceae*) (Bahcecioglu et al. 2006).

Scariola viminea F.W.Schmidt (Bahcecioglu & Gjaerum 2003).

***Puccinia lapsanae* Fuckel**

Jurinea consanguinea L. (*Asteraceae*) (Bahcecioglu & Isiloglu 1995, Bahcecioglu & Yıldız 2001).

Lapsana L. (*Asteraceae*) (Demirci et al. 1997).

Lapsana communis L. (Bahcecioglu & Isiloglu 1995; Bahcecioglu & Yıldız 2001, 2005; Bahcecioglu & Gjaerum 2004; Bahcecioglu et al. 2006; Kabaktepe & Bahcecioglu 2006; Kabaktepe 2010).

Lapsana intermedia M. Bieb. (Bremer et al. 1947; Gobelez 1962).

***Puccinia lecokiae* Kotschy**

Lecokia cretica DC. (*Apiaceae*) (Tamer et al. 1987).

***Puccinia leontodontis* Jacky.**

Leontodon crispus Vill. (*Asteraceae*) (Bahcecioglu 2001; Bahcecioglu & Yıldız 2005)

Leontodon asperrimus (Willd.) J. Ball (Bahcecioglu 2001; Bahcecioglu & Yıldız 2005).

***Puccinia libani* Magnus**

Peucedanum pisidicum Boiss. (*Apiaceae*) (Henderson 1959).

Prangos Lindl. (*Apiaceae*) (Bahcecioglu et al. 2006; Henderson 1959).

Prangos ferulacea Lindl. (Kabaktepe 2010).

Prangos pabularia Lindl. (Bahcecioglu & Gjaerum 2004; Bahcecioglu & Yıldız 2005; Kabaktepe 2010).

***Puccinia libanotidis* Lindr.**

Prangos Lindl. (*Apiaceae*) (Henderson 1964).

***Puccinia liliacearum* Duby**

Ornithogalum L. (*Hyacinthaceae*) (Bahcecioglu & Yıldız 2005; Henderson 1959; Tamer & Altan 1995).

Ornithogalum pyrenaicum L. (Bahçecioglu & Yıldız 1996)

Tulipa sintenisii Baker (*Liliaceae*) (Bahçecioglu & Yıldız 1996).

Puccinia lojkaiana Thum.

Hyacinthella lineata (Steud.) Chouard (*Hyacinthaceae*) (Henderson 1964).

Puccinia limosae Magnus

Lysimachia vulgaris L. (*Primulaceae*) (Demirci et al. 1997).

Puccinia littoralis Rostr.

Juncus gerardii Loisel. (*Juncaceae*) (Bremer et al. 1947).

Puccinia maculosa Schwein.

Cicerbita Wallr. (*Asteraceae*) (Bahçecioglu et al. 2006).

Cicerbita bourgaei Beauverd (Kabaktepe 2010).

Cicerbita brevirostris (Sch. Bip. ex Vis. & Pančić) C. Jeffrey (Bahçecioglu et al. 2006).

Gundelia tournefortii L. (*Asteraceae*) (Bahçecioglu & Isiloglu 1995, Bahçecioglu & Yıldız 2001; Tamer & Altan 1995).

Puccinia madritensis Maire

Clematis cirrhosa L. (*Ranunculaceae*) (Gobelez 1962).

Puccinia magnusiana Korn.,

Phragmites australis (*Poaceae*) (Cav.) Trin ex Steudel (Kabaktepe 2010).

Puccinia major Dietel

Crepis paludosa Moench (*Asteraceae*) (Henderson 1964).

Puccinia majoricensis Maire

Teucrium chamaedrys L. (*Lamiaceae*) (Kabaktepe 2010).

Teucrium polium L. (Kabaktepe 2010).

Puccinia malatyensis Gjaerum & Bahc.

Johrenia berytea Boiss. & Hausskn. ex Boiss. (*Apiaceae*) (Bahçecioglu & Gjaerum 2003).

Puccinia malvacearum Bertero ex Mont.

Alcea L. (*Malvaceae*) (Oner et al. 1984).

Alcea apterocarpa Boiss. (Bremer et al. 1947).

Alcea heldreichii Boiss. (Tamer et al. 1997).

Alcea hohenackeri Boiss. (Bahçecioglu & Isiloglu 1995, Bahçecioglu & Yıldız 1996, Bahçecioglu & Yıldız 2001; Bahçecioglu et al. 2006; Kabaktepe & Bahçecioglu 2006; Kabaktepe 2010).

Alcea rosea L. (Bahçecioglu & Isiloglu 1995).

Alcea setosa Alef. (Bahcecioglu & Isiloglu 1995 Bahcecioglu & Yıldız 2001).

Alcea striata Alef. (Bahcecioglu et al. 2006).

Althaea L. (*Malvaceae*) (Bremer et al. 1947; Karaboz & Oner 1982).

Althaea rosea Cav. (Bremer et al. 1947; Karel 1958; Gobelez 1962; Kavak 2006).

Lavatera punctata All. (*Malvaceae*) (Karaboz & Oner 1982).

Malva L. (*Malvaceae*) (Güven & Tamer 1993).

Malva neglecta Wallr. (Bahcecioglu & Yıldız 2005; Bahcecioglu et al. 2006; Kabaktepe & Bahcecioglu 2006; Kabaktepe 2010).

Malva sylvestris L. (Bahcecioglu & Isiloglu 1995, Bahcecioglu & Yıldız 2001; Ekici et al. 2010; Gobelez 1962; Karaboz & Oner 1982; Oner & Ekmekci 1974; Tamer & Oner 1978a; Ucar & Oner 1977).

Puccinia mariana Sacc.

Silybum marianum (L.) Gaertn. (*Asteraceae*) (Tamer & Oner 1978a).

Puccinia martianoffiana Thum.

Paeonia mascula (L.) Mill. (*Paeoniaceae*) (Henderson 1957).

Puccinia menthae Pers.

Calamintha Mill. (*Lamiaceae*) (Henderson 1961, 1964).

Clinopodium vulgare L. subsp. *arundanum* (Boiss.) Nyman (*Lamiaceae*) (Bahcecioglu & Gjaerum 2003; Bahcecioglu et al. 2006 Erdogdu et al. 2010).

Mentha L. (*Lamiaceae*) (Bahcecioglu & Isiloglu 1995; Demirci et al. 1997; Güven & Tamer 1993; Oner & Ekmekci 1974; Oner et al. 1984; Tamer & Altan 1995).

Mentha longifolia Huds. (Bahcecioglu & Isiloglu 1995, Bahcecioglu & Yıldız 2001; Bahcecioglu et al. 2006).

Mentha pulegium L. (Erdogdu et al. 2010; Kabaktepe & Bahcecioglu 2006; Kabaktepe 2010; Tamer & Oner 1978a).

Mentha spicata L. (Bahcecioglu & Yıldız 1996, Bahcecioglu & Yıldız 2001, 2005; Bahcecioglu et al. 2006; Kabaktepe & Bahcecioglu 2006; Kabaktepe 2010).

Micromeria fruticosa (L.) Druce (*Lamiaceae*) (Henderson 1961; Tamer et al. 1997).

Origanum vulgare L. (*Lamiaceae*) (Bahcecioglu et al. 2006; Henderson 1964; Kabaktepe & Bahcecioglu 2006; Kabaktepe 2010; Pekel & Azaz 2003; Tamer et al. 1990a).

Satureja L. (*Lamiaceae*) (Henderson 1957).

Satureja macrantha C. A. Mey. (Tamer et al. 1989).

Puccinia mertensiae Peck

Omphalodes Mill. (*Boraginaceae*) (Henderson 1959).

Puccinia mesnieriana Thum.

Rhamnus oleoides L. (*Rhamnaceae*) (Henderson 1959).

Puccinia minutissima Arthur

Lythrum salicaria L. (*Lythraceae*) (Oner et al. 1974).

Puccinia montana Fuckel

Centaurea axillaris Willd. (*Asteraceae*) (Henderson 1964).

Centaurea carduiformis DC. (Bahcecioglu & Yıldız 2005).

Centaurea kotschy (Boiss. & Heldr.) Hayek (Bahcecioglu & Yıldız 2005).

Centaurea mucronifera DC. (Bahcecioglu & Yıldız 2005).

Centaurea rhizantha C. A. Mey. (Bahcecioglu & Yıldız 2005).

Puccinia mulgedii (Westend.) P.Syd. & Syd.

Cicerbita mulgedioides (*Asteraceae*) (Sch. Bip. ex Vis. & Panc.) Beauvred (Bahcecioglu 2001; Bahcecioglu & Yıldız 2005).

Puccinia nevodovskii Gamalitzk.

Galium floribundum Sibth. & Sm. (*Rubiaceae*) (Ekici et al. 2010).

Puccinia nigrescens Kirchn.

Salvia L. (*Lamiaceae*) (Erdogdu et al. 2010; Kabaktepe & Bahcecioglu 2006).

Salvia amasiana Freyn & Bornm. (Henderson 1964).

Salvia multicaulis Vahl (Bahcecioglu & Yıldız 2005).

Salvia verticillata L. (Bahcecioglu & Yıldız 2005; Bahcecioglu et al. 2006; Kabaktepe & Bahcecioglu 2006; Kabaktepe 2010).

Puccinia nishidana Henn.

Cirsium lappaceum (M. Bieb.) Fischer (*Asteraceae*) (Bahcecioglu 2001; Bahcecioglu & Yıldız 2005; Kabaktepe 2010).

Puccinia nitida Barclay

Aethusa cynapium L. (*Apiaceae*) (Demirci et al. 1997 as *Puccinia aethusae* H. Mart.).

Puccinia notobasidis Politis

Notobasis syriaca Cass. (*Asteraceae*) (Henderson 1957).

Puccinia obscura J. Schröt.

Luzula DC. (*Juncaceae*) (Henderson 1964).

Luzula campestris (L.) DC. (Tamer et al. 1989).

Puccinia onosmatis Gjaerum & Bahc.

Onosma sericea Willd. (*Boraginaceae*) (Bahcecioglu & Gjaerum 2003).

Puccinia onosmaticola Gjaerum & Bahc.

Onosma molle DC. (*Boraginaceae*) (Bahcecioglu & Gjaerum 2004).

***Puccinia opopanacis* Ces.**

Opopanax orientalis Boiss. (*Apiaceae*) (Henderson 1964).

Silaus carvifolius C. A. Mey. (*Apiaceae*) (Henderson 1964).

***Puccinia pachyderma* Wettst.**

Gagea granatelli Boiss. (*Liliaceae*) (Bahcecioglu & Yıldız 1996, Bahcecioglu 1998).

***Puccinia pachyphloea* P. Syd. & Syd.**

Rumex acetosella L. (*Polygonaceae*) (Henderson 1957).

***Puccinia pedunculata* J. Schröt.**

Rumex scutatus L. (*Polygonaceae*) (Kabaktepe 2010).

***Puccinia persica* Wettst.**

Centaurea aggregata Fisch. & Mey. (*Asteraceae*) (Bremer et al. 1952; Gobelez 1962; Tamer et al. 1992).

***Puccinia phaeopappi* Maire**

Staelhelia lobelii DC. (*Asteraceae*) (Henderson 1959).

***Puccinia phlomidis* Thum**

Phlomis L. (*Lamiaceae*) (Tamer & Altan 1995).

Phlomis armeniaca Willd. (Bremer et al. 1947, 1952 Gobelez 1962).

Phlomis kurdica Rech. f. (Tamer et al. 1987).

Phlomis pungens Willd. (Bahcecioglu & Yıldız 2005; Kabaktepe 2010).

Phlomis russeliana Lag. ex Benth. (Kabaktepe 2010).

***Puccinia phragmitis* (Schumach.) Korn.**

Arundo donax L. (*Poaceae*) (Oner et al. 1984; Tamer & Oner 1978a; Ucar & Oner 1977).

Rumex L. (*Polygonaceae*) (Bremer et al. 1952; Gobelez 1962).

Phragmites L. (*Poaceae*) (Demirci et al. 1997; Oner & Ekmekci 1974).

Phragmites australis Cav. (Bahcecioglu & Isiloglu 1995, Bahcecioglu & Yıldız 2001, 2005; Kabaktepe & Bahcecioglu 2006; Kabaktepe 2010).

Phragmites communis Trin. (Gobelez 1962).

***Puccinia phrynae* Huseyin & Kirbag**

Phryna ortegioides (Fisch. & Mey.) Pax & K.Hoffm. (*Caryophyllaceae*) (Kirbag & Huseyin 2003).

***Puccinia physospermi* Pass.**

Cnidium orientale Boiss. (*Apiaceae*) (Henderson 1961).

***Puccinia pimpinellae* (F.Strauss) Link**

Pimpinella L. (*Apiaceae*) (Bremer et al. 1947; Gobelez 1962; Henderson 1959; Tamer & Altan 1995).

Pimpinella anthriscoides Boiss. (Kabaktepe 2010).

Pimpinella aurea DC. (Bahcecioglu & Yıldız 2005).

Pimpinella corymbosa Boiss. (Bahcecioglu & Yıldız 2005; Bahcecioglu et al. 2006).

Pimpinella cretica Vis. (Bremer et al. 1947).

Pimpinella kotschyana Boiss. (Bahcecioglu et al. 2006; Tamer et al. 1990a, 1990b).

Pimpinella olivierioides Boiss. & Hausskn. (Bahcecioglu & Yıldız 2005; Tamer et al. 1990b).

Pimpinella rhodantha Boiss. (Kabaktepe & Bahcecioglu 2006).

Pimpinella tragium Vill. subsp. *lythophyta* (Schisck.) Tutin (Bahcecioglu & Yıldız 2005; Bremer et al. 1952).

Tordylium apulum L. (*Apiaceae*) (Karaboz & Oner 1982).

Puccinia platypoda Syd. & P. Syd.

Atraphaxis billardierei Jaub. & Spach (*Polygonaceae*) (Henderson 1959; Kabaktepe 2010).

Puccinia plicata Kom.

Prangos Lindl. (*Apiaceae*) (Henderson 1964).

Prangos denticulata Fisch. & Mey. (Bremer et al. 1947; Gobelez 1962).

Prangos pabularia Lindl. (Bahcecioglu & Yıldız 1996).

Puccinia poarum E. Nielsen

Phleum pratense L. (*Poaceae*) (Gobelez 1962).

Poa L. (*Poaceae*) (Henderson 1964).

Poa annua L. (Ekici et al. 2010).

Poa bulbosa L. (Oner et al. 1974).

Poa nemoralis L. (Bahcecioglu & Yıldız 2005; Kabaktepe 2010).

Tussilago farfara L. (*Asteraceae*) (Bahcecioglu & Gjaerum 2003; Bremer et al. 1952; Ekici et al. 2010; Gobelez 1962; Pekel & Azaz 2003).

Puccinia podospermi DC.

Scorzonera cinerea Boiss. (*Asteraceae*) (Bahcecioglu & Yıldız 2005; Kabaktepe 2010).

Puccinia polygoni-amphibii var. *convolvuli* Arthur

Polygonum L. (*Polygonaceae*) (Bremer et al. 1947; Gobelez 1962; Karaboz & Oner 1982).

Polygonum alpinum All. (Tamer et al. 1989).

Polygonum arenarium Waldst. & Kit. (Tamer et al. 1992).

Polygonum arenastrum Bor. (Oner et al. 1984).

Polygonum convolvuli L. (Kabaktepe & Bahcecioglu 2006; Kabaktepe 2010).

Polygonum lapathifolium L. (Bahcecioglu & Yıldız 2005 as *Puccinia polygoni* Alb. & Schwein.).

Puccinia prenanthis-purpureae (DC.) Lindr.

Lactuca L. (*Asteraceae*) (Henderson 1964).

Puccinia prostii Duby

Tulipa armena Boiss. (*Liliaceae*) (Tamer et al. 1990a).

Tulipa hayatii O.Schwarz (Karaboz & Oner 1982).

Puccinia pulverulenta Grev.

Epilobium L. (*Onagraceae*) (Bahcecioglu et al. 2006).

Epilobium hirsutum L. (Erdogdu et al. 2010; Gobelez 1962 as *Puccinia epilobii-tetragoni* G. Winter; Kabaktepe 2010).

Epilobium minutiflorum Hausskn. (Tamer et al. 1992 as *P. epilobii-tetragoni*).

Epilobium montanum Boiss. (Kabaktepe 2010).

Epilobium parviflorum Schreb. (Kabaktepe 2010).

Epilobium tetragonum L. (Tamer et al. 1990a as *P. epilobii-tetragoni*).

Puccinia pulvinata Rabenh.

Echinops L. (*Asteraceae*) (Bahcecioglu & Gjaerum 2004; Bremer et al. 1952; Gobelez 1962).

Echinops ritro L. (Bahcecioglu & Gjaerum 2004).

Puccinia punctata Link

Galium L. (*Rubiaceae*) (Erdogdu et al. 2010; Henderson 1959; Tamer et al. 1997).

Galium aparine L. (Tamer & Oner 1978a, 1978b).

Galium humifusum M. Bieb. (Bahcecioglu & Yıldız 2005).

Galium margaceum Ehrend. & Schonb.Tem. (Bahcecioglu & Yıldız 2005).

Galium psilophyllum Ehrend. & Schonb.Tem. (Bahcecioglu & Yıldız 2005).

Galium verum L. (Bahcecioglu & Yıldız 2005; Bahcecioglu et al. 2006; Kabaktepe & Bahcecioglu 2006; Kabaktepe 2010).

Galium verum L. subsp. *glabrescens* Ehrend. (Bahcecioglu & Yıldız 2005).

Puccinia punctiformis (F. Strauss) Rohl.

Cirsium arvense (L.) Scop. (*Asteraceae*) (Demirci et al. 1997; Gobelez 1962 as *Puccinia suaveolens* (Pers.) Rostr.; Henderson 1964).

Cirsium simplex C. A. Mey. (Demirci et al. 1997).

Cirsium vulgare (Savi) Ten. (Kabaktepe & Bahçecioglu 2006).

Puccinia purpurea Cooke

Andropogon halepensis (L.) Brot. (*Poaceae*) (Bremer et al. 1952; Gobelez 1962).

Puccinia pygmaea Erikss.

Calamagrostis littorea DC. (*Poaceae*) (Henderson 1964).

Puccinia ranunculi A. Blytt

Ranunculus repens L. (*Ranunculaceae*) (Tamer et al. 1989).

Puccinia recondita Dietel & Holw.

Aconitum nasutum Rchb. (*Ranunculaceae*) (Kabaktepe 2010).

Agropyron repens (L.) P.Beauv. (*Poaceae*) (Bremer et al. 1947 as *Puccinia persistens* Plowr.)

Agrostis stolonifera L. (*Poaceae*) (Bahçecioglu & Yıldız 2005 as *P. persistens*).

Anchusa L. (*Boraginaceae*) Trabzon (Bremer et al. 1947; Demirci et al. 1997; Gobelez 1962 as *Puccinia dispersa* Erikss. & Henning).

Anchusa leptophylla Roemer & Schultes (Kabaktepe 2010).

Bromus L. (*Poaceae*) (Demirci et al. 1997).

Bromus japonicus Thunb. (Kabaktepe 2010).

Bromus lanceolatus Roth. (Kabaktepe 2010; Tamer et al. 1990b).

Bromus sterilis L. (Tamer et al. 1987).

Bromus tectorum L. (Bremer et al. 1947 as *Puccinia symphyti-bromorum* Fr. Mull.).

Cerintho minor L. (*Boraginaceae*) (Bahçecioglu & Gjaerum 2004; Kabaktepe 2010).

Clematis cirrhosa L. (*Ranunculaceae*) (Gobelez 1962 as *Puccinia agropyri* Ellis & Everh.)

Echium L. (*Boraginaceae*) (Oner et al. 1984).

Echium plantagineum L. (*Poaceae*) (Karaboz & Oner 1982).

Elymus elongatus (Host) Runemark subsp. *turcicus* (McGuire) Melderis (Bahçecioglu & Yıldız 2005 as *P. persistens*).

Elymus lazicus (Boiss.) Melderis subsp. *lazicus* (Bahçecioglu & Yıldız 2005 as *P. persistens*).

Elymus longearistatus (Boiss.) Tzvelev (Bahçecioglu & Yıldız 2005 as *P. persistens*).

Elymus nodosus (Nevski) Melderis subsp. *gypsicolus* Melderis (Bahçecioglu & Yıldız 2005 as *P. persistens*).

Elymus repens (L.) Gould subsp. *repens* (Bahçecioglu & Yıldız 2005 as *P. persistens*).

Leontodon crispus Vill. (*Asteraceae*) (Pekel & Azaz 2003 as *Puccinia dispersa* Erikss. & Henning).

Lolium rigidum Gaudin (*Poaceae*) (Kabaktepe 2010).

Myosotis lithospermifolia Hornem. (*Boraginaceae*) (Bahcecioglu & Gjaerum 2004).

Ranunculus caucasicus M. Bieb. (*Ranunculaceae*) (Kabaktepe 2010).

Secale cereale L. (*Poaceae*) (Bremer et al. 1947; Karel 1958 as *P. dispersa*).

Symphytum asperum Lepechin (*Boraginaceae*) (Kabaktepe 2010).

Thalictrum minus L. (*Ranunculaceae*) (Kabaktepe 2010).

Triticum L. (*Poaceae*) (Akan et al. 2006).

Triticum sativum Lam. (Bremer et al. 1947; Karel 1958 as *Puccinia triticina* Erikss.).

Puccinia rhagadioli (Pass.) Syd.

Rhagadiolus hedynois All. (*Asteraceae*) (Henderson 1959, 1964).

Puccinia romagnoliana Maire & Sacc.

Cyperus L. (*Cyperaceae*) (Bremer et al. 1952; Gobeletz 1962).

Puccinia rubiae-tataricae Syd. & P.Syd.

Rubia tinctoria Salisb. (*Rubiaceae*) (Bahcecioglu et al. 2006; Ekici et al. 2010).

Puccinia salviae Unger

Salvia L. (*Lamiaceae*) (Demirci et al. 1997; Guven & Tamer 1993; Tamer & Altan 1995).

Puccinia salihae Kirbag & Aime

Thymelaea aucheri Meisn. (*Thymelaeaceae*) (Kirbag et al. 2011).

Puccinia saxifragae Schldtl.

Saxifraga L. (*Saxifragaceae*) (Henderson 1964).

Saxifraga sibirica L. (Bremer et al. 1952; Henderson 1959 as *Puccinia heucherae* var. *saxifragae* (Schldtl.) Savile; Gobeletz 1962).

Puccinia schemahensis Uljan.

Blysmus compressus (L.) Panzer (*Cyperaceae*) (Bahcecioglu 2001; Bahcecioglu & Yıldız 2005).

Puccinia schirajewskii Tranzschel

Serratula cerinthifolia (Sibth. & Sm.) Boiss. (*Asteraceae*) (Henderson 1964).

Puccinia scorzonerae (Schumach.) Jacky

Scorzonera L. (*Asteraceae*) (Bahcecioglu & Isiloglu 1995;_Henderson 1959; Tamer et al. 1997).

Scorzonera cana (C. A. Mey.) Hoffm. (Guven & Tamer 1993).

Scorzonera cinerea Boiss. (Bahçecioglu & Yıldız 1996).

Scorzonera eriophora DC. (Bahçecioglu & Yıldız 2005; Kabaktepe 2010).

Scorzonera mollis M. Bieb. subsp. *mollis* (Bahçecioglu & Yıldız 2005).

Scorzonera tomentosa L. (Bahçecioglu & Isiloglu 1995; Bahçecioglu & Yıldız 1996; Bahçecioglu et al. 2006).

Puccinia serratulae Thum.

Serratula cerinthifolia (*Asteraceae*) (Sibth. & Sm.) Boiss. (Tamer et al. 1987, 1990a, 1992).

Puccinia sessilis J. Schröt.

Phalaris arundinacea L. (*Poaceae*) (Henderson 1961).

Puccinia sherardiana Korn.

Malvella sherardiana Jaub. & Spach (*Malvaceae*) (Bremer et al. 1952; Gobelez 1962).

Puccinia serpylli Lindr.

Thymus fallax Fisch. & Mey. (*Lamiaceae*) (Bahçecioglu & Gjaerum 2004).

Thymus fedtschenkoi Ronniger (Bahçecioglu & Gjaerum 2004).

Thymus kotschyanus Boiss. & Hohen. (Bahçecioglu & Gjaerum 2004; Bahçecioglu et al. 2006; Henderson 1959).

Thymus transcaucasicus Ronniger (Kabaktepe 2010).

Puccinia smilacis Schwein.

Smilax excelsa L. (*Smilacaceae*) (Huseyin & Karahan 2005; Kabaktepe & Bahçecioglu 2005, 2006).

Puccinia smyrnii Biv.

Smyrniium cordifolium Boiss. (*Apiaceae*) (Bahçecioglu & Yıldız 1996).

Smyrniium rotundifolium Mill. (Oner et al. 1974).

Puccinia sorghi Schwein.

Zea mays L. (*Poaceae*) (Bahçecioglu & Isiloglu 1995; Bahçecioglu et al. 2006; Karel 1958; Kabaktepe & Bahçecioglu 2006).

Puccinia stachydis DC.

Stachys annua L. (*Lamiaceae*) (Kabaktepe 2010).

Puccinia stapfiana Petr.

Phlomis armeniaca Willd. (*Lamiaceae*) (Henderson 1957).

Puccinia stipae (Opiz) Arthur var. *stipae*

Salvia cadmica Boiss. (*Lamiaceae*) (Bahçecioglu & Yıldız 2005).

Salvia cryptantha Montbret & Aucher ex Bent. (Bahcecioglu & Yıldız 2005).

Salvia euphratica Montbret & Aucher ex Bent. (Bahcecioglu & Yıldız 2005).

Salvia multicaulis Vahl (Bahcecioglu & Yıldız 2005).

Stipa holosericea Trin. (*Poaceae*) (Güven & Tamer 1993).

Stipa pontica P. Smirnow (Kabaktepe 2010).

Puccinia stipae* var. *stipina (Tranzschel) H.C. Greene & Cummins

Thymus kotschyanus Boiss. & Hohen. (*Lamiaceae*) (Bahcecioglu & Gjaerum 2004).

Puccinia stipina Tranzschel

Salvia cryptantha Montbret & Aucher ex Benth. (*Lamiaceae*) (Bahcecioglu et al. 2006).

Salvia multicaulis Vahl (Bahcecioglu et al. 2006).

Salvia rosifolia Sm. (Kabaktepe 2010).

Salvia viridis L. (Bahcecioglu et al. 2006).

Stipagrostis plumosa Munro ex T. Anderson (*Poaceae*) (Tamer et al. 1990b).

Thymus fallax Fisch. & Mey. (*Lamiaceae*) (Bahcecioglu et al. 2006).

Puccinia striiformis Westend

Aegilops L. (*Poaceae*) (Henderson 1964).

Aegilops triuncialis L. (Karaboz & Oner 1982; Ucar & Oner 1977).

Aegilops umbellulata Zhuk. (Karaboz & Oner 1982).

Bromus armenus Boiss. (*Poaceae*) (Tamer & Oner 1978a).

Bromus sterilis L. (Kabaktepe 2010).

Dactylis glomerata L. (*Poaceae*) (Bahcecioglu & Yıldız 2005).

Elymus hispidus (Opizi) Melderis (*Poaceae*) (Ekici et al. 2010; Kabaktepe 2010).

Elymus repens (L.) Gould (Kabaktepe 2010).

Hordeum L. (*Poaceae*) (Bahcecioglu et al. 2006; Güven & Tamer 1993).

Hordeum murinum L. (Karaboz & Oner 1982).

Inula L. (*Asteraceae*) (Oner et al. 1984).

Inula viscosa (L.) Aiton (Ucar & Oner 1977).

Lolium perenne L. (*Poaceae*) (Kabaktepe 2010).

Phleum pratense L. (*Poaceae*) (Kabaktepe 2010).

Taeniatherum crinitum (Schreb.) Nevski (*Poaceae*) (Henderson 1964; Karaboz & Oner 1982).

Tragopogon longirostris Bischoff ex Sch. Bip. (*Asteraceae*) (Tamer et al. 1990b).

Triticum L. (*Poaceae*) (*Poaceae*) (Akan et al. 2006).

Triticum carthlicum Nevski (Parlak & Gücin 1993).

Puccinia syriaca P. Syd. & Syd.

Crucianella L. (*Rubiaceae*) (Henderson 1961).

Puccinia tanacetii DC.

Artemisia absinthium L. (*Asteraceae*) (Demirci et al. 1997 Kabaktepe 2010).

Artemisia campestris L. (Bahcecioglu et al. 2006).

Artemisia marschalliana Spreng. (Kabaktepe 2010).

Artemisia vulgaris L. (Bahcecioglu et al. 2006; Kabaktepe 2010).

Tanacetum L. (*Asteraceae*) (Henderson 1959, 1964; Tamer et al. 1997).

Tanacetum argenteum Willd. (Bahcecioglu & Isiloglu 1995; Bahcecioglu & Yıldız 2005).

Tanacetum cilicicum (Boiss.) Grierson (Bahcecioglu et al. 2006).

Tanacetum densum (Labill.) Heywood (Bahcecioglu & Yıldız 1996; Bahcecioglu & Yıldız 2005; Bahcecioglu et al. 2006).

Tanacetum nitens (Boiss. & Noë) Grierson (Bahcecioglu & Yıldız 1996).

Tanacetum vulgare L. (Bahcecioglu & Yıldız 2005).

Puccinia tendae Gäum.

Thymus fedtschenkoi Ronniger (*Lamiaceae*) (Kabaktepe 2010).

Puccinia tepperi F. Ludw.

Phragmites australis Cav. (*Poaceae*) (Bahcecioglu & Gjaerum 2004; Bahcecioglu et al. 2006).

Puccinia thesii (Desv.) Chaillet

Thesium arvense Horvdtovszky (*Santalaceae*) (Kabaktepe & Bahcecioglu 2006; Kabaktepe 2010).

Thesium compressum Boiss. & Heldr. (Bahcecioglu & Yıldız 1996).

Thesium macranthum Fenzl (Henderson 1959).

Thesium procumbens C. A. Mey. (Bahcecioglu & Yıldız 2005).

Thesium stelleroides Jaub. & Spach (Bahcecioglu & Yıldız 2005).

Thesium tauricum Boiss. & Hausskn. (Bahcecioglu & Yıldız 2005).

Puccinia thlaspeos C.Schub.

Thlaspi violascens Schott & Kotschy ex Unger & Kotschy (*Brassicaceae*) (Bahcecioglu et al. 2006).

Puccinia trabutii Roum.

Lepidium L. (*Brassicaceae*) (Henderson 1964).

Phragmites communis Trin. (*Poaceae*) (Bremer et al. 1952; Gobelez 1962).

Sisymbrium altissimum L. (*Brassicaceae*) (Tamer et al. 1987).

Sisymbrium officinale (L.) Scop. (Tamer et al. 1987).

Puccinia umbilicicola Gjaerum & Bahc.

Umbilicus erectus DC. (*Crassulaceae*) (Bahcecioglu & Gjaerum 2003).

Puccinia uralensis Tranzschel

Senecio vernalis Waldst. & Kit (*Asteraceae*) (Kabaktepe & Bahcecioglu 2006; Kabaktepe 2010).

Puccinia variabilis Grev.

Taraxacum F. H. Wigg. (*Asteraceae*) (Kabaktepe 2010).

Puccinia violae (Schumach.) DC.

Viola L. (*Violaceae*) (Henderson 1964).

Viola canica L. (Tamer et al. 1987).

Viola kitaibeliana Roem. & Schult. (Bremer et al. 1952; Gobelez 1962; Kabaktepe & Bahcecioglu 2006; Kabaktepe 2010).

Viola odorata L. (Bahcecioglu et al. 2006).

Viola sieheana W. Becker (Bahcecioglu & Yıldız 1996).

Puccinia vincae (DC.) Plowr.

Vinca L. (*Apocynaceae*) (Henderson 1961, 1964).

Vinca major L. (Bremer et al. 1952; Karel 1958; Gobelez 1962).

Puccinia vossii Korn. ex G. Winter

Stachys setifera subsp. *lycia* (Gand.) R. Bhattacharjee (*Lamiaceae*) (Tamer et al. 1987).

Puccinia wolgensis Navashin

Stipa szowitsiana Trin. ex Hohen. (*Poaceae*) (Henderson 1957).

Puccinia xanthii Schwein.

Xanthium spinosum L. (*Asteraceae*) (Bahcecioglu et al. 2006; Kabaktepe & Bahcecioglu 2006).

Xanthium strumarium L. (Bahcecioglu & Isiloglu 1995, Bahcecioglu & Yıldız 2001; Bahcecioglu et al. 2006; Gobelez 1962; Kabaktepe 2010; Oner & Ekmekci 1974; Oner et al. 1984; Ucar & Oner 1977).

Puccinia yildizii Gjaerum & Bahc.

Echinophora tenuifolia L. (*Apiaceae*) (Bahcecioglu & Gjaerum 2003).

Puccinia ziziphorae P. Syd. & Syd.

Ziziphora clinopodioides Lam. (*Lamiaceae*) (Bahcecioglu & Yıldız 1996, 2005; Henderson 1959, 1961; Kabaktepe 2010; Tamer et al. 1987).

Uromyces acantholimonis Syd. & P. Syd.

Acantholimon Boiss. (*Plumbaginaceae*) (Bremer et al. 1947; Gobelez 1962; Tamer et al. 1997).

Acantholimon caryophyllaceum Boiss. (Bahcecioglu & Yıldız 1996; Kabaktepe 2010).

Uromyces acetosae J. Schröt.

Rumex acetosae L. (*Polygonaceae*) (Tamer et al. 1997).

Rumex acetoselloides Bal. (Bremer et al. 1947; Gobelez 1962).

Uromyces aeluropodis-repentis Natrass

Aeluropus littoralis (Gouan) Parl. (*Poaceae*) (Bahçecioğlu 2001; Bahçecioğlu & Yıldız 2005).

Uromyces alopecuri Seym.

Alopecurus arundinaceus Poir. (*Poaceae*) (Tamer et al. 1987).

Uromyces alsinis Tranzschel

Minuartia L. (*Caryophyllaceae*) (Bahçecioğlu et al. 2006).

Minuartia meyeri Bornm. (Bahçecioğlu 2001).

Minuartia hamata Mattf. (Bahçecioğlu 2001).

Uromyces anagyridis (Rabenh.) Roum.

Anagyris foetida L. (*Fabaceae*) (Bremer et al. 1952; Gobelez 1962; Henderson 1964; Oner & Ekmekci 1974; Oner et al. 1974; Tamer & Oner 1978a).

Uromyces anthyllidis (Grev.) J. Schröt.

Anthyllis vulneraria L. (*Fabaceae*) (Bahçecioğlu & Yıldız 2005).

Dorycnium graecum Ser. (*Fabaceae*) (Bahçecioğlu & Yıldız 2005; Bahçecioğlu et al. 2006).

Dorycnium pentaphyllum Scop. (Bahçecioğlu et al. 2006).

Hippocrepis unisiliquosa L. (*Fabaceae*) (Karaboz & Oner 1982).

Lotus corniculatus L. (*Fabaceae*) (Bahçecioğlu & Yıldız 2005; Bahçecioğlu et al. 2006; Kabaktepe 2010).

Uromyces appendiculatus (Pers.) Unger

Phaseolus vulgaris L. (*Fabaceae*) (Bahçecioğlu et al. 2006; Kabaktepe & Bahçecioğlu 2006; Kabaktepe 2010; Karel 1958).

Uromyces arenariae Tranzschel

Arenaria gypsophiloides L. (*Caryophyllaceae*) (Tamer et al. 1987; Tamer et al. 1990b).

Uromyces arenariae-grandiflorae Mayor

Arenaria saponarioides Boiss. & Ball. (*Caryophyllaceae*) (Sert 2009).

Uromyces arenariae-leptocladi Vienn.-Bourg.

Arenaria leptoclados (Rchb.) Guss. (*Caryophyllaceae*) (Sert 2009).

Uromyces astragali Jordi

Astragalus L. (*Fabaceae*) (Tamer et al. 1997).

Uromyces baumlerianus Bubák

Melilotus neapolitanus Ten. ex Guss. (*Fabaceae*) (Kabaktepe & Bahcecioglu 2005, 2006).

Melilotus officinalis (L.) Lam. (Kabaktepe & Bahcecioglu 2006).

Uromyces behenis (DC.) Unger

Silene L. (*Caryophyllaceae*) (Bahcecioglu et al. 2006; Gobelez 1962).

Silene alba Muhl. ex Rohrb. (Kabaktepe 2010).

Silene italica (L.) Pers (Bahcecioglu & Yıldız 2005).

Silene marschallii C. A. Mey. (Henderson 1964; Tamer et al. 1989).

Silene vulgaris (Moench) Garcke (Bahcecioglu & Yıldız 2005; Kabaktepe & Bahcecioglu 2006).

Uromyces beticola (Belynyck) Boerema, Loer. & Hamers

Beta vulgaris L. (*Chenopodiaceae*) (Bremer et al. 1947, 1952; Gobelez 1962 as *Uromyces betae* (Pers.) J.G. Kuhn; Kabaktepe 2010).

Uromyces caricis-sempervirentis E. Fisch.

Carex stenophylla Wahlenb. (*Cyperaceae*) (Tamer et al. 1987).

Uromyces chenopodii (Duby) J. Schröt.

Suaeda maritima (L.) Dumort. (*Chenopodiaceae*) (Oner et al. 1974).

Uromyces ciceris-arietini (Grognot) Jacz. & Boyd

Cicer arietinum L. (*Fabaceae*) Hatay, (Bahcecioglu et al. 2006; Gobelez 1962; Kabaktepe & Bahcecioglu 2006).

Uromyces colchici Masee

Colchicum speciosum Steven (*Colchicaceae*) (Kabaktepe 2010).

Uromyces cytisi J. Schröt.

Genista aucheri Boiss. (*Fabaceae*) (Bahcecioglu 2001; Bahcecioglu & Yıldız 2005).

Uromyces dactylidis G.H. Otth

Dactylis glomerata L. (*Poaceae*) (Kabaktepe 2010).

Ficaria grandiflora Robert (*Ranunculaceae*) (Bremer et al. 1952; Gobelez 1962 as *Uromyces poae* Rabenh.).

Poa bulbosa L. (*Poaceae*) (Henderson 1964).

Ranunculus oxyspermus Willd. (*Ranunculaceae*) (Henderson 1964).

Uromyces dianthi (Pers.) Niessl

Bufonia tenuifolia L. (*Caryophyllaceae*) (Tamer et al. 1990b).

Bufonia virgata Boiss. (Bahcecioglu & Gjaerum 2003).

Dianthus L. (*Caryophyllaceae*) (Güven & Tamer 1993 as *Uromyces caryophyllinus* (Schränk) J. Schröt.).

Dianthus barbatus L. (Bremer et al. 1952; Karel 1958 as *U. caryophyllinus*).

Dianthus calocephalus Boiss. (Erdogdu et al. 2010; Kabaktepe & Bahcecioglu 2006; Kabaktepe 2010).

Dianthus floribundus Boiss. (Bahcecioglu & Yıldız 1996; Bahcecioglu & Yıldız 2005).

Dianthus masmenaeus Boiss. (Tamer et al. 1990b).

Dianthus orientalis Adams (Bahcecioglu & Yıldız 2005; Tamer et al. 1987 as *U. caryophyllinus*).

Dianthus strictus Banks & Sol. (Bahcecioglu & Yıldız 2005; Tamer et al. 1987 as *Uromyces caryophyllinus*).

Dianthus zonatus Fenzl (Kabaktepe 2010).

Gypsophila pilosa Hud. (*Caryophyllaceae*) (Bahcecioglu & Isiloglu 1995, Bahcecioglu & Yıldız 2001).

Petrorhagia alpina (Habl.) P.W.Ball & Heywood (*Caryophyllaceae*) (Bahcecioglu & Gjaerum 2003).

Uromyces dorystoechadis Gjaerum & Bahc.

Dorystoechas hastata Boiss. & Heldr. ex Benth. (*Lamiaceae*) (Bahcecioglu & Gjaerum 2004).

Uromyces eurotiae Tranzschel

Krascheninnikovia ceratoides (L.) Gueldenst. (*Chenopodiaceae*) (Bahcecioglu & Gjaerum 2003).

Uromyces ficariae (Schumach.) Lév.

Ficaria Hall. (*Ranunculaceae*) (Oner et al. 1974).

Uromyces fischeri-eduardi Magnus

Vicia cracca L. (*Fabaceae*) (Bahcecioglu 2001; Bahcecioglu & Yıldız 2005; Kabaktepe 2010).

Vicia freyniana Bornm. (Kabaktepe & Bahcecioglu 2006).

Vicia villosa Roth (Kabaktepe & Bahcecioglu 2006; Kabaktepe 2010).

Uromyces gageae Beck

Gagea granatelli Parl. (*Liliaceae*) (Bahcecioglu & Isiloglu 1995, Bahcecioglu & Yıldız 1996).

Uromyces galegae (Opiz) Sacc.

Galega officinalis L. (*Fabaceae*) (Tunali et al. 2006).

Uromyces galegicola Woron.

Galega officinalis L. (*Fabaceae*) (Bahcecioglu 2001; Bahcecioglu & Yıldız 2005).

Uromyces genistae Fuckel

Genista tinctoria L. (*Fabaceae*) (Kabaktepe 2010).

Uromyces geranii Speg.

Erodium L'Hér. (*Geraniaceae*) (Güven & Tamer 1993).

Geranium L. (*Geraniaceae*) (Bahcecioglu et al. 2006; Güven & Tamer 1993; Oner et al. 1984; Tamer & Altan 1995).

Geranium cinereum Cav. (Kabaktepe & Bahcecioglu 2006; Kabaktepe 2010).

Geranium pyrenaicum Burm. (Bahcecioglu & Yıldız 1996; Bahcecioglu & Yıldız 2005)

Geranium rotundifolium L. (Bahcecioglu & Isiloglu 1995; Kabaktepe 2010).

Uromyces glycyrrhizae (Rabenh.) Magnus

Glycyrrhiza L. (*Fabaceae*) (Bahcecioglu et al. 2006; Oner et al. 1984).

Glycyrrhiza echinata L. (Bahcecioglu & Yıldız 2005; Kabaktepe 2010).

Glycyrrhiza glabra L. (Bahcecioglu & Isiloglu 1995, Bahcecioglu & Yıldız 2001; Demirci et al. 1997; Kabaktepe 2010; Oner & Ekmekci 1974; Tamer et al. 1987).

Uromyces gypsophilae Cooke

Gypsophila L. (*Caryophyllaceae*) (Tamer et al. 1997).

Gypsophila hispida Boiss. (Kabaktepe & Bahcecioglu 2006).

Gypsophila pallida Stapf (Bahcecioglu & Yıldız 1996).

Gypsophila perfoliata L. (Bahcecioglu & Yıldız 2005).

Saponaria L. (*Caryophyllaceae*) (Henderson 1964).

Vaccaria pyramidata Medik. (*Caryophyllaceae*) (Bahcecioglu & Yıldız 1996, 2005; Gobeletz 1962).

Uromyces hedysari-obscuri (DC.) Carestina & Picc.

Hedysarum L. (*Fabaceae*) (Bahcecioglu 2001)

Hedysarum pestalozzae Boiss. (Bahcecioglu 2001; Bahcecioglu & Yıldız 2005).

Hedysarum varium Willd. (Bahcecioglu & Yıldız 2005).

Uromyces helichrysi Lagerh.

Helichrysum plicatum DC. (*Asteraceae*) (Bahcecioglu et al. 2006).

Uromyces heliotropii Sred.

Heliotropium L. (*Boraginaceae*) (Henderson 1964; Tamer et al. 1997).

Heliotropium eichwaldi Steud. (Bremer et al. 1952; Gobeletz 1962).

Heliotropium ellipticum Gurke in Engl. & Prantl (Kabaktepe 2010).

Heliotropium europaeum L. (Bremer et al. 1947, 1952).

Uromyces hymenocarpi Jaap

Hymenocarpus circinnatus (L.) Savi (*Fabaceae*) (Bahcecioglu et al. 2006; Karaboz & Oner 1982; Tamer & Oner 1978a, 1978b).

Uromyces inaequialtus Lasch

Silene laxa Boiss. & Kotschy (*Caryophyllaceae*) (Tamer et al. 1997).

Uromyces iranensis Vienn.-Bourg.

Hordeum bulbosum L. (*Poaceae*) (Oran 1972).

Uromyces klebahnii E. Fisch.

Astragalus aduncus Willd. (*Fabaceae*) (Tamer et al. 1990b).

Uromyces kochiae Petr. & Syd.

Kochia prostrata (L.) Schrad. (*Chenopodiaceae*) (Kabaktepe 2010).

Uromyces laevis Korn.

Euphorbia macroclada Boiss. (*Euphorbiaceae*) (Henderson 1964).

Uromyces lapponicus Lagerh.

Astragalus pinetorum Boiss. (*Fabaceae*) (Henderson 1964).

Uromyces limonii (DC.) Lev.

Limonium Mill. (*Plumbaginaceae*) (Bahçecioglu & Yıldız 2005; Henderson 1964).

Limonium gmelini (Willd.) Kuntze (Bahçecioglu & Yıldız 2005).

Statice limonium Pall. (*Plumbaginaceae*) (Oner et al. 1984).

Statice sinuata L. (Bremer et al. 1947; Gobelez 1962).

Uromyces lineolatus (Desm.) J. Schröt.

Scirpus maritimus L. (*Cyperaceae*) (Henderson 1964).

Uromyces magnusii Kleb.

Medicago rigidula (L.) Desr. (*Fabaceae*) (Tamer et al. 1990a, 1992).

Uromyces muscari Lev.

Hyacinthus orientalis L. (*Hyacinthaceae*) (Bahçecioglu & Yıldız 2005).

Muscari L. (*Liliaceae*) (Bahçecioglu & Yıldız 2005; Gobelez 1962; Henderson 1964).

Muscari comosum (L.) Mill. (Kabaktepe 2010).

Urginea maritima Baker (*Hyacinthaceae*) (Bremer et al. 1952; Gobelez 1962 as *Uromyces scillarum* (Grev.) G. Winter).

Uromyces ononidis Pass.

Ononis spinosa L. (*Fabaceae*) (Bahçecioglu & Yıldız 2005; Bahçecioglu et al. 2006; Gobelez 1962; Kabaktepe 2010).

Uromyces petitmenginii Maire

Minuartia meyeri Bornm. (*Caryophyllaceae*) (Henderson 1964).

Uromyces pisi-sativi (Pers.) Liro

Astragalus L. (*Fabaceae*) (Henderson 1961 as *Uromyces punctatus* J. Schröt.; Kabaktepe & Bahçecioglu 2006; Kabaktepe 2010).

- Astragalus densifolius* Lam. (Bahcecioglu & Gjaerum 2004 as *U. punctatus*).
- Astragalus gummifer* Labill. (Bahcecioglu et al. 2006 as *Uromyces pisi* (DC.) G.H. Otth).
- Astragalus lagurus* Willd. (Bahcecioglu et al. 2006 as *U. pisi*).
- Astragalus ponticus* Pall. (Kabaktepe & Bahcecioglu 2006).
- Astragalus squalidus* Boiss. & Noë (Bahcecioglu & Yıldız 1996 as *U. pisi*).
- Colutea* L. (*Fabaceae*) (Bremer et al. 1952; Karel 1958; Gobelez 1962 as *Uromyces genistae-tinctoriae* (Pers.) Fuckel ex G. Winter).
- Euphorbia cyparissias* L. (*Euphorbiaceae*) (Erdogdu et al. 2010).
- Euphorbia virgata* Waldst. & Kit. ex Willd. (Bahcecioglu & Yıldız 2005 as *Uromyces pisi*; Kabaktepe 2010).
- Genista tinctoria* L. (*Fabaceae*) (Kabaktepe & Bahcecioglu 2006).
- Lathyrus annuus* L. (*Fabaceae*) (Kabaktepe & Bahcecioglu 2006; Kabaktepe 2010).
- Lathyrus pratensis* L. (Bahcecioglu et al. 2006 as *U. pisi*).
- Lathyrus roseus* Stev. (Kabaktepe 2010).
- Lotus corniculatus* L. (*Fabaceae*) (Bahcecioglu et al. 2006 as *U. pisi*).
- Lotus gebelia* Vent. (Tamer et al. 1990b as *Uromyces loti* A. Blytt).
- Medicago falcata* L. (*Fabaceae*) (Bahcecioglu et al. 2006 as *U. pisi*; Kabaktepe 2010).
- Medicago littoralis* Loisel. (Bahcecioglu et al. 2006 as *U. pisi*).
- Medicago lupulina* L. (Bahcecioglu et al. 2006 as *U. pisi*; Kabaktepe & Bahcecioglu 2006).
- Medicago papillosa* Boiss. (Kabaktepe 2010).
- Medicago polymorpha* L. (Kabaktepe 2010).
- Medicago rigidula* (L.) All. (Kabaktepe 2010).
- Medicago sativa* L. (Kabaktepe 2010).
- Medicago varia* Martyn (Bahcecioglu et al. 2006 as *U. pisi*; Kabaktepe & Bahcecioglu 2006; Kabaktepe 2010).
- Onobrychis* Mill. (*Fabaceae*) (Demirci et al. 1997 as *Uromyces onobrychidis* (Desm.) Lév.).
- Onobrychis altissima* Grossh. (Kabaktepe 2010).
- Onobrychis armena* Boiss (Kabaktepe & Bahcecioglu 2006; Kabaktepe 2010).
- Onobrychis cappadocica* Boiss. (Bahcecioglu & Yıldız 2005 as *U. onobrychidis*).
- Onobrychis galegifolia* Boiss. (Bahcecioglu & Yıldız 1996 as *U. onobrychidis*).
- Onobrychis hypargyrea* Boiss. (Bremer et al. 1952; Gobelez 1962 as *U. onobrychidis*).

Onobrychis radiata (Desf.) M. Bieb. (Bahçecioğlu & Yıldız 2005 as *U. onobrychidis*; Kabaktepe 2010).

Onobrychis transcaucasica Grossh. (Kabaktepe 2010).

Onobrychis viciifolia Scop. (Bremer et al. 1947; Karel 1958; Gobelez 1962 as *U. onobrychidis*; Kabaktepe 2010).

Trifolium pratense L. (*Fabaceae*) (Bahçecioğlu et al. 2006 as *U. pisi*).

Vicia L. (*Fabaceae*) (Bahçecioğlu et al. 2006 as *U. pisi*).

***Uromyces polygoni* Peck**

Pistacia lentiscus L. (*Anacardiaceae*) (Gobelez 1962).

Footnote: *U. polygoni* parasite of *Polygonum* sp. There is no record of *U. polygoni* on *Pistacia* except in Gobelez (1962).

Polygonum L. (*Polygonaceae*) (Bremer et al. 1947).

Polygonum alpestre C. A. Mey. (Bremer et al. 1952; Gobelez 1962).

Polygonum arenastrum Bor. (Bahçecioğlu & Yıldız 2005; Tamer et al. 1989).

Polygonum bellardii All. (Bahçecioğlu & Yıldız 2005).

Polygonum cognatum Meisn. (Tamer et al. 1987).

Polygonum maritimum L. (Bremer et al. 1947).

***Uromyces polygoni-avicularis* (Pers.) P. t.**

Polygonum L. (*Polygonaceae*) (Demirci et al. 1997).

Polygonum aviculare L. (Demirci et al. 1997; Kabaktepe 2010).

Polygonum bellardii All. (Kabaktepe & Bahçecioğlu 2006; Kabaktepe 2010).

Polygonum bistorta L. (Bahçecioğlu & Isıoğlu 1995, Bahçecioğlu & Yıldız 2001).

Polygonum cognatum Meisn. (Pekel & Azaz 2003; Tamer et al. 1989).

Polygonum lapathifolium L. (Bahçecioğlu & Isıoğlu 1995, Bahçecioğlu & Yıldız 2001).

Polygonum luzuloides Jaub. & Spach (Bahçecioğlu & Isıoğlu 1995, Bahçecioğlu & Yıldız 2001).

Polygonum polycnemoides Jaub. & Spach (Bahçecioğlu et al. 2006).

Rumex acetosella L. (*Polygonaceae*) (Erdogdu et al. 2010).

***Uromyces rumicis* (Schumach.) G. Winter**

Rumex L. (*Polygonaceae*) (Bahçecioğlu & Yıldız 2005; Guven & Tamer 1993; Karaboz & Oner 1982).

Rumex acetosella L. (Bahçecioğlu & Isıoğlu 1995, Bahçecioğlu & Yıldız 2001)

Rumex angustifolius Campd. (Bahçecioğlu & Isıoğlu 1995; Kabaktepe & Bahçecioğlu 2006).

Rumex alpinus L. (Kabaktepe & Bahçecioğlu 2006).

Rumex conglomeratus Murray (Bahcecioglu & Isiloglu 1995, Bahcecioglu & Yıldız 1996, Bahcecioglu & Yıldız 2001; Bahcecioglu et al. 2006).

Rumex cristatus DC. (Bahcecioglu & Isiloglu 1995, Bahcecioglu & Yıldız 2001)

Rumex obtusifolius L. (Bahcecioglu & Isiloglu 1995)

Rumex patientia L. (Bahcecioglu & Isiloglu 1995; Bahcecioglu et al. 2006; Gobelez 1962; Kabaktepe & Bahcecioglu 2006; Kabaktepe 2010; Ucar & Oner 1977).

Rumex pulcher L. (Bahcecioglu et al. 2006; Oner et al. 1974; Tamer & Oner 1978a).

Rumex scutatus L. (Bahcecioglu & Isiloglu 1995, Bahcecioglu & Yıldız 2001; Ekici et al. 2010).

Rumex tuberosus L. (Bahcecioglu et al. 2006; Kabaktepe & Bahcecioglu 2006; Kabaktepe 2010).

Uromyces salsolae Reichardt.

Noaea Moq. (*Chenopodiaceae*) (Demirci et al. 1997; Tamer et al. 1997).

Noaea mucronata (Forssk.) Aschers. & Schweinf. subsp. *mucronata* (Bahcecioglu & Yıldız 2005; Bremer et al. 1952; Kabaktepe 2010).

Noaea spinosissima Moq. (Gobelez 1962).

Petrosimonia brachiata Bunge (*Chenopodiaceae*) (Henderson 1961).

Uromyces scleranthi Rostr.

Minuartia hamata Mattf. (*Caryophyllaceae*) (Bahcecioglu & Gjaerum 2004; Bahcecioglu & Yıldız 2005).

Minuartia juniperina Maire & Petitm. (Bahcecioglu et al. 2006).

Minuartia meyeri (Boiss.) Bornm. (Bahcecioglu & Yıldız 2005).

Uromyces scutellatus (Schrank) Lév.

Euphorbia virgata Waldst. & Kit. (*Euphorbiaceae*) (Henderson 1964; Kabaktepe 2010).

Uromyces silenes (Schltdl.) Fuckel

Silene L. (*Caryophyllaceae*) (Oner & Ekmekci 1974).

Uromyces silenes-ponticae Const.

Silene rhynchocarpa Boiss. (*Caryophyllaceae*) (Bahcecioglu et al. 2006).

Silene spergulifolia M. Bieb. (Bahcecioglu et al. 2006).

Uromyces sommerfeltii Hyl., Jørst. & Nannf.

Solidago L. (*Asteraceae*) (Henderson 1964).

Uromyces sophorae-flavescentis Kusano

Sophora jaubertii Spach ex Jaub. & Spach (*Fabaceae*) (Kabaktepe & Bahcecioglu 2005, 2006; Kabaktepe 2010).

***Uromyces striatus* S. Schröt.**

Argyrolobium biebersteinii P.W. Ball (*Fabaceae*) (Kabaktepe & Bahçecioğlu 2006).

Medicago L. (*Fabaceae*) (Bremer et al. 1952; Henderson 1964).

Medicago falcata L. (Bahçecioğlu & Yıldız 2005).

Medicago minima (L.) Bartal. (Tamer & Oner 1978a).

Medicago sativa L. Bilecik (Bremer et al. 1947, 1952; Karel 1958; Gobelez 1962).

Medicago varia Martyn (Bahçecioğlu & Yıldız 2005; Bahçecioğlu et al. 2006; Erdogdu et al. 2010).

Pisum sativum L. (*Fabaceae*) (Kabaktepe 2010).

Trifolium pratense L. (*Fabaceae*) (Bahçecioğlu et al. 2006).

***Uromyces tenuicutis* McAlpine**

Parietaria judaica L. (*Urticaceae*) (Pekel & Azaz 2003).

***Uromyces thapsi* (Opiz) Bubák**

Verbascum L. (*Scrophulariaceae*) (Henderson 1964).

***Uromyces tinctoriicola* Magnus**

Euphorbia L. (*Euphorbiaceae*) (Bahçecioğlu & Isiloğlu 1995; Bahçecioğlu et al. 2006; Tamer & Altan 1995).

Euphorbia cardiophylla Boiss. & Heldr. (Bahçecioğlu & Isiloğlu 1995; Bahçecioğlu & Yıldız 2005).

Euphorbia macroclada Boiss. (Tamer et al. 1987, 1990a, 1992).

Euphorbia petrophila C. A. Mey. (Bahçecioğlu & Isiloğlu 1995; Bahçecioğlu & Yıldız 2001)

Euphorbia virgata Waldst. & Kit. (Bahçecioğlu & Isiloğlu 1995; Bahçecioğlu & Yıldız 2001, 2005).

***Uromyces trifolii* (R. Hedw.) Lév.**

Trifolium L. (*Fabaceae*) (Bahçecioğlu & Isiloğlu 1995; Bremer et al. 1952; Guven & Tamer 1993; Henderson 1964 as *Uromyces nerviphilus* (Grognot) Hotson; Karaboz & Oner 1982; Oner & Ekmekci 1974; Tamer & Altan 1995).

Trifolium alpestre L. (Bahçecioğlu & Yıldız 2005).

Trifolium ambiguum M. Bieb. (Bahçecioğlu & Isiloğlu 1995, Bahçecioğlu & Yıldız 2001).

Trifolium fragiferum L. (Bahçecioğlu et al. 2006).

Trifolium nigrescens Viv. (Tamer & Oner 1978a).

Trifolium pratense L. (Bahçecioğlu & Yıldız 2005; Bahçecioğlu et al. 2006; Kabaktepe 2010).

Trifolium pannonicum Jacq. subsp. *elongata* (Willd.) Zoh. (Bahçecioğlu & Yıldız 2005).

Trifolium repens L. (Bahcecioglu et al. 2006; Karel 1958; Demirci et al. 1997; Henderson 1964 as *Uromyces nerviphilus* (Grognot) Hotson; Tamer et al. 1987).

Trifolium resupinatum L. (Bahcecioglu et al. 2006; Tamer & Oner 1978a).

***Uromyces trifolii-repentis* var. *fallens* (Arthur) Cummins**

Medicago falcata L. (*Fabaceae*) (Kabaktepe & Bahcecioglu 2006).

Medicago lupulina L. (Kabaktepe & Bahcecioglu 2006).

Medicago rigidula (L.) All. (Kabaktepe & Bahcecioglu 2006).

Trifolium pratense L. (*Fabaceae*) (Bahcecioglu & Gjaerum 2004; Kabaktepe & Bahcecioglu 2006; Kabaktepe 2010; Karel 1958).

***Uromyces trigonellae* Pass.**

Trigonella cancellata Desf. (*Fabaceae*) (Kabaktepe 2010).

Trigonella fischeriana Ser. (Kabaktepe & Bahcecioglu 2006).

Trigonella foenum-graecum L. (Bremer et al. 1952; Karel 1958).

Trigonella monantha C. A. Mey. (Bahcecioglu & Yıldız 2005).

Trigonella monspeliaca L. (Tamer et al. 1990a).

***Uromyces valerianae* Fuckel**

Valeriana L. (*Valerianaceae*) (Henderson 1964).

Valeriana dioscoridis Sibth. & Sm. (Tamer et al. 1990a).

***Uromyces veratri* (DC.) J. Schröt.**

Veratrum album L. (*Melanthiaceae*) (Kabaktepe 2010).

***Uromyces verruculosus* J. Schröt.**

Silene alba (Miller) Krause (*Caryophyllaceae*) (Bahcecioglu 2001; Bahcecioglu & Yıldız 2005).

Silene spergulifolia M. Bieb. (Kabaktepe 2010).

Silene italica (L.) Pers. (Bahcecioglu 2001; Bahcecioglu & Yıldız 2005).

***Uromyces vesicatorius* (Bubák) Nattrass**

Lens esculenta Moench (*Fabaceae*) (Bremer et al. 1947; Gobelez 1962).

Footnote: *U. vesicatorius* is parasite of *Leontice* sp. and *Leonotis* sp. There is no record of *U. vesicatorius* on *Lens esculenta* except in Bremer (1947) and Gobelez (1962).

Leontice leontopetaloides L. (*Berberidaceae*) (Henderson 1959).

***Uromyces viciae-fabae* (Pers.) J. Schröt.**

Lathyrus tuberosus L. (*Fabaceae*) (Parlak & Guçin 1993).

Lens esculenta Moench (*Fabaceae*) (Bremer et al. 1952; Karel 1958; Gobelez 1962 as *Uromyces fabae* (Pers.) de Bary).

Pisum sativum L. (*Fabaceae*) (Bremer et al. 1952; Gobelez 1962 as *U. fabae*).

Vicia L. (*Fabaceae*) (Bahcecioglu et al. 2006).

Vicia cracca L. (Bahcecioglu & Yıldız 2005 as *U. fabae*).
Vicia faba L. (Bremer et al. 1947, 1952; Karel 1958 as *U. fabae*).
Vicia hybrida L. (Henderson 1964; Tamer & Oner 1978a).
Vicia narbonensis L. (Tamer et al. 1990a).
Vicia sativa L. (Bremer et al. 1947 as *U. fabae*).
Vicia villosa Roth (Kabaktepe 2010).

***Uromyces viciae-craccae* Const.**

Vicia cracca L. (*Fabaceae*) (Bahcecioglu 2001; Bahcecioglu & Yıldız 2005).

***Uromyces vignae* Barclay**

Vigna sinensis L. (*Fabaceae*) Mugla (Oner et al. 1984 as *Uromyces phaseoli* var. *vignae* (Barclay) Arthur).

***Zaghouania phillyreae* Pat.**

Phillyrea latifolia L. (*Oleaceae*) (Bahcecioglu & Gjaerum 2004).

Pucciniastraceae

***Hyalopsora polypodii* (Pers.) Magnus**

Cystopteris fragilis (L.) Bernh. (*Woodsiaceae*) (Henderson 1961; Tamer et al. 1989).

***Melampsorella caryophyllacearum* (DC.) J. Schröt.**

Abies bornmuelleriana Mattf. (*Pinaceae*) (Bremer et al. 1947; Karel 1958; Gobelez 1962).

Abies nordmanniana Spach (Henderson 1964).

Arenaria leptoclados (Rchb.) Guss. (Sert & Sumbul 2005).

***Melampsorella symphyti* Bubák**

Symphytum L. (*Boraginaceae*) (Henderson 1964).

***Melampsorium betulinum* (Pers.) Kleb.**

Betula pendula Roth. (*Betulaceae*) (Huseyin & Selcuk 2000, 2001, 2004).

***Melampsorium carpini* (Nees) Dietel**

Carpinus betulus L. (*Betulaceae*) (Huseyin & Selcuk 2000, 2001, 2004).

***Melampsorium hiratsukanum* S. Ito ex Hirats. f.**

Alnus orientalis Decne. (*Betulaceae*) (Sert & Sumbul 2005).

***Pucciniastrum agrimoniae* (Dietel) Tranzschel**

Agrimonia L. (*Rosaceae*) (Bahcecioglu et al. 2006).

Agrimonia eupatoria L. (Henderson 1964; Kabaktepe & Bahcecioglu 2006; Kabaktepe 2010).

***Pucciniastrum brachybotrydis* (Tranzschel) Jørst.**

Omphalodes cappadocica DC. (*Boraginaceae*) (Henderson 1964).

Pucciniastrum circaeae (Schumach.) Speg.

Circaea alpina L. (*Onagraceae*) (Henderson 1964).

Pucciniastrum epilobii G.H. Otth

Epilobium angustifolium L. (*Onagraceae*) (Kabaktepe 2010).

Epilobium hirsutum L. (Bremer et al. 1947,1952; Gobelez 1962).

Pucciniastrum pyrolae Dietel ex Arthur

Pyrola media Hayne (*Ericaceae*) (Henderson 1964).

Uropyxidaceae

Ochropsora ariae (Fuckel) Ramsb.

Anemone blanda Schott & Kotschy (*Ranunculaceae*) (Bahcecioglu & Gjaerum 2004).

Tranzschelia discolor (Fuckel) Tranzschel & M.A. Litv.

Prunus L. (*Rosaceae*) (Bahcecioglu et al. 2006).

Prunus armeniaca L. (Onan & Saydam 1995).

Prunus divaricata Ledeb. (Bahcecioglu et al. 2006).

Prunus spinosa L. (Kabaktepe & Bahcecioglu 2006).

Tranzschelia pruni-spinosae (Pers.) Dietel

Amygdalus communis L. (*Rosaceae*) (Bremer et al. 1947; Karel 1958; Gobelez 1962 as *Puccinia pruni-spinosae* Pers.; Ucar & Oner 1977).

Amygdalus orientalis Mill. (Bremer et al. 1947; Karel 1958 as *P. pruni-spinosae*).

Anemone coronaria L. (*Ranunculaceae*) (Bremer et al. 1947; Gobelez 1962; Tamer & Oner 1978a as *P. pruni-spinosae*).

Prunus amygdalus Batsch (*Rosaceae*) (Oner et al. 1984).

Prunus armeniaca L. (Bremer et al. 1947, 1952; Karel 1958 as *P. pruni-spinosae*).

Prunus cerasifera Ehrh. (Soylu et al. 2004)

Prunus domestica L. (Bremer et al. 1947; Karel 1958 as *P. pruni-spinosae*; Oner et al. 1984; Ucar & Oner 1977).

Prunus persica (L.) Batsch (Bremer et al. 1947; Karel 1958 as *P. pruni-spinosae*).

Prunus spinosa L. (Kabaktepe 2010).

Incertae sedis

Aecidium haussknechtianum Henn.

Berberis crataegina DC. (*Berberidaceae*) (Bremer et al. 1952; Gobelez 1962).

Aecidium leontices Tranzschel

Leontice leontopetaloides L. (*Berberidaceae*) (Gobelez 1962; Henderson 1959).

Aecidium marcii Bubák

Mercurialis annua L. (*Euphorbiaceae*) (Bremer et al. 1947; Gobelez 1962).

Aecidium otitis Schltdl.

Silene italica (L.) Pers. (*Caryophyllaceae*) (Bahçecioglu 2001; Bahçecioglu & Yıldız 2005).

Aecidium phlomidis Thum.

Phlomis capitata Boiss. (*Lamiaceae*) (Henderson 1957).

Aecidium scabiosae Dozy & Molk.

Scabiosa palaestina L. (*Dipsacaceae*) (Bremer et al. 1952; Gobelez 1962).

Scabiosa rotata M. Bieb. (Bremer et al. 1952; Gobelez 1962).

Uredo daphnicola Dietel

Daphne oleoides Schreb. (*Thymelaeaceae*) (Kabaktepe & Bahçecioglu 2005, 2006).

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Crataegus pentagyna: *Gymnosporangium confusum*
Crataegus szowitsii: *Gymnosporangium confusum*
Crataegus tanacetifolia: *Gymnosporangium confusum*
Crepis: *Puccinia crepidicola*
Crepis alpina: *Puccinia crepidis*, *P. crepidicola*
Crepis foetida: *Puccinia crepidis*, *P. crepidicola*
Crepis paludosa: *Puccinia major*
Crepis sancta: *Puccinia crepidicola*
Cressa cretica: *Puccinia cressae*
Cruciata laevipes: *Puccinia galii-cruciatae*
Cruciata taurica: *Puccinia galii-cruciatae*
Crucianella: *Puccinia syriaca*
Cydonia vulgaris: *Gymnosporangium confusum*

Cynodon dactylon: *Puccinia cynodontis*
Cyperus: *Puccinia cyperi*, *P. romagnoliana*
Cyperus capitatus: *Puccinia cyperi*
Cyperus rotundus: *Puccinia conclusa*
Cystopteris fragilis: *Hyalopsora polypodii*
Dactylis glomerata: *Puccinia graminis*, *P. striiformis*, *Uromyces dactylidis*
Daphne oleoides: *Uredo daphnicola*
Datisca cannabina: *Coleosporium datiscaae*
Daucus carota: *Puccinia chaerophylli*
Dianthus: *Uromyces dianthi*
Dianthus barbatus: *Uromyces dianthi*
Dianthus calocephalus: *Uromyces dianthi*
Dianthus floribundus: *Uromyces dianthi*
Dianthus masmenaeus: *Uromyces dianthi*
Dianthus orientalis: *Uromyces dianthi*
Dianthus strictus: *Uromyces dianthi*
Dianthus zonatus: *Uromyces dianthi*
Dorycnium graecum: *Uromyces anthyllidis*
Dorycnium pentaphyllum: *Uromyces anthyllidis*
Dorystoechas hastata: *Uromyces dorystoechadis*
Echinophora tenuifolia: *Puccinia yildizii*
Echinops: *Puccinia echinopsis*, *P. pulvinata*
Echinops galaticus: *Puccinia calcitrapae*
Echinops melitenensis: *Puccinia calcitrapae*, *P. echinopsis*
Echinops pungens var. *pungens*: *Puccinia calcitrapae*, *P. echinopsis*
Echinops ritro: *Puccinia calcitrapae*, *P. echinopsis*, *P. pulvinata*
Echium: *Puccinia recondita*
Echium plantagineum: *Puccinia recondita*
Eleocharis mitracarpa: *Puccinia cyperi*
Elymus caput-medusae: *Puccinia graminis*
Elymus elongatus: *Puccinia graminis*, *P. recondita*
Elymus hispidus: *Puccinia graminis*, *P. striiformis*
Elymus lazicus: *Puccinia graminis*, *P. recondita*
Elymus longearistatus: *Puccinia recondita*
Elymus nodosus: *Puccinia graminis*, *P. recondita*
Elymus repens: *Puccinia elymi*, *P. graminis*, *P. recondita*, *P. striiformis*
Epilobium: *Puccinia pulverulenta*
Epilobium angustifolium: *Pucciniastrum epilobii*
Epilobium hirsutum: *Puccinia pulverulenta*, *Pucciniastrum epilobii*
Epilobium minutiflorum: *Puccinia pulverulenta*
Epilobium montanum: *Puccinia pulverulenta*
Epilobium parviflorum: *Puccinia pulverulenta*

Epilobium tetragonum: *Puccinia pulverulenta*
Eremopoa persica: *Puccinia graminis*
Eremurus: *Puccinia eremuri*
Eremurus spectabilis: *Puccinia eremuri*
Erigeron acer: *Puccinia caricis-erigerontis*
Erodium: *Uromyces geranii*
Eryngium: *Puccinia eryngii*
Eryngium billardierei: *Puccinia eryngii*
Eryngium campestre: *Puccinia eryngii*
Erysimum repandum: *Puccinia holboellii*
Euonymus: *Melampsora epitea* var. *epitea*
Euphorbia: *Melampsora euphorbiae*, *Uromyces tinctoriicola*
Euphorbia altissima: *Melampsora euphorbiae*
Euphorbia cardiophylla: *Melampsora euphorbiae*, *Uromyces tinctoriicola*
Euphorbia cheiradenia: *Melampsora euphorbiae*
Euphorbia cyparissias: *Uromyces pisi-sativi*
Euphorbia falcata: *Melampsora euphorbiae*
Euphorbia helioscopia: *Melampsora euphorbiae*
Euphorbia heteradena: *Melampsora euphorbiae-dulcis*
Euphorbia macroclada: *Melampsora euphorbiae*, *Uromyces laevis*, *U. tinctoriicola*
Euphorbia orientalis: *Melampsora euphorbiae*
Euphorbia peplus: *Melampsora euphorbiae*
Euphorbia petiolata: *Melampsora euphorbiae*
Euphorbia petrophila: *Uromyces tinctoriicola*
Euphorbia rigida: *Melampsora euphorbiae*
Euphorbia taurinensis: *Melampsora euphorbiae*
Euphorbia tinctoria: *Melampsora euphorbiae*
Euphorbia virgata: *Melampsora euphorbiae*, *M. euphorbiae-dulcis*, *Uromyces pisi-sativi*, *U. scutellatus*, *U. tinctoriicola*
Euphrasia hirtella: *Coleosporium tussilaginis*
Euphrasia pectinata: *Coleosporium tussilaginis*
Falcaria: *Puccinia falcariae*
Falcaria rivini: *Puccinia falcariae*
Falcaria vulgaris: *Puccinia falcariae*
Ferula orientalis: *Puccinia ferulae*
Ferulago longistylis: *Puccinia ferulae*
Festuca: *Puccinia festucae*
Festuca valesiaca: *Puccinia graminis*
Ficaria: *Uromyces ficariae*
Ficaria grandiflora: *Uromyces dactylidis*
Ficus carica: *Cerotelium fici*

Fragaria vesca: *Phragmidium fragariae*
Frangula alnus: *Puccinia coronata* var. *avenae*
Frankenia hirsuta: *Puccinia frankeniae*
Gagea granatelli: *Puccinia pachyderma*, *Uromyces gageae*
Galega officinalis: *Uromyces galegae*, *U. galegicola*
Galium: *Puccinia punctata*
Galium aparine: *Puccinia punctata*
Galium floribundum: *Puccinia nevodovskii*
Galium humifusum: *Puccinia punctata*
Galium margaceum: *Puccinia punctata*
Galium mite: *Puccinia asperulina*
Galium psilophyllum: *Puccinia punctata*
Galium verum: *Puccinia galii-cruciatae*, *P. punctata*
Genista aucheri: *Uromyces cytisi*
Genista tinctoria: *Uromyces genistae*, *U. pisi-sativi*
Gentiana cruciata: *Puccinia gentianae*
Gentiana lutea: *Puccinia gentianae*
Gentiana septemfida: *Puccinia gentianae*
Geranium: *Puccinia geranii-silvatici*, *Uromyces geranii*
Geranium cinereum: *Uromyces geranii*
Geranium pyrenaicum: *Uromyces geranii*
Geranium rotundifolium: *Uromyces geranii*
Geranium tuberosum: *Puccinia geranii-silvatici*
Geum heterocarpum: *Phragmidium circumvallatum*
Gladiolus atrovioleaceus: *Puccinia gladioli*
Gladiolus kotschyanus: *Puccinia gladioli*
Glycyrrhiza: *Uromyces glycyrrhizae*
Glycyrrhiza echinata: *Uromyces glycyrrhizae*
Glycyrrhiza glabra: *Uromyces glycyrrhizae*
Gypsophila: *Uromyces gypsophilae*
Gypsophila hispida: *Uromyces gypsophilae*
Gypsophila pallida: *Uromyces gypsophilae*
Gypsophila perfoliata: *Uromyces gypsophilae*
Gundelia tournefortii: *Puccinia gundeliae*, *P. maculosa*
Gypsophila pilosa: *Uromyces dianthi*
Hedysarum: *Uromyces hedysari-obscuri*
Hedysarum pestalozzae: *Uromyces hedysari-obscuri*
Hedysarum pogonocarpum: *Puccinia hedysari-obscuri*
Hedysarum pycnostachyum: *Puccinia hedysari-obscuri*
Hedysarum rotundifolium: *Puccinia hedysari-obscuri*
Hedysarum varium: *Uromyces hedysari-obscuri*
Helianthus annuus: *Puccinia helianthi*

Helichrysum plicatum: *Uromyces helichrysi*
Heliotropium: *Uromyces heliotropii*
Heliotropium eichwaldi: *Uromyces heliotropii*
Heliotropium ellipticum: *Uromyces heliotropii*
Heliotropium europaeum: *Uromyces heliotropii*
Heracleum: *Puccinia heraclei*
Heracleum trachyloma: *Puccinia heraclei*
Hieracium: *Puccinia hieracii* var. *hieracii*
Hieracium olympicum: *Puccinia hieracii* var. *hieracii*
Hieracium pannosum: *Puccinia hieracii* var. *hieracii*
Hippocrepis unisiliquosa: *Uromyces anthyllidis*
Holcus setiglumis: *Puccinia hordei*
Hordeum: *Puccinia graminis*, *P. hordei*, *P. striiformis*
Hordeum bulbosum: *Puccinia graminis*, *P. hordei*, *Uromyces iranensis*
Hordeum distichon: *Puccinia graminis*, *P. hordei*
Hordeum marinum: *Puccinia graminis*
Hordeum murinum: *Puccinia glumarum*, *P. graminis*, *P. striiformis*
Hordeum sativum: *Puccinia glumarum*, *P. graminis*, *P. hordei*
Hordeum vulgare: *Puccinia hordei*
Hyacinthella lineata: *Puccinia lojkaiana*
Hyacinthus orientalis: *Uromyces muscari*
Hymenocarpus circinnatus: *Uromyces hymenocarpi*
Hypericum: *Melampsora hypericorum*
Hypericum androsaemum: *Melampsora hypericorum*
Hypericum crispum: *Melampsora hypericorum*
Hypericum empetrifolium: *Melampsora hypericorum*
Hypericum lydiium: *Melampsora hypericorum*
Hypericum perforatum: *Melampsora hypericorum*
Imperata cylindrica: *Puccinia imperatae*
Inula: *Puccinia gnaphalii*, *Puccinia striiformis*
Inula aucheriana: *Coleosporium inulae*, *Puccinia hieracii* var. *hieracii*
Inula graveolens: *Puccinia gnaphalii*
Inula viscosa: *Coleosporium inulae*, *Puccinia gnaphalii*, *P. striiformis*
Iris: *Puccinia iridis*
Iris sari: *Puccinia iridis*
Iris taochia: *Puccinia iridis*
Jasminum fruticans: *Puccinia jasmini*
Johrenia berytea: *Puccinia malatyensis*
Juncus acutus: *Puccinia cancellata*
Juncus gerardii: *Puccinia littoralis*
Juniperus communis: *Gymnosporangium cornutum*
Juniperus drupacea: *Gymnosporangium clavariiforme*

- Juniperus excelsa*: *Gymnosporangium clavariiforme*, *G. sabiniae*
Juniperus foetidissima: *Gymnosporangium clavariiforme*
Juniperus nana: *Gymnosporangium gaeumannii*, *G. sabiniae*
Juniperus oxycedrus: *Gymnosporangium clavariiforme*, *G. confusum*, *G. sabiniae*
Jurinea: *Puccinia jurineae*
Jurinea aucheriana: *Puccinia fuckelii*
Jurinea consanguinea: *Puccinia lapsanae*
Kochia prostrata: *Uromyces kochiae*
Krascheninnikovia ceratoides: *Uromyces eurotiae*
Lactuca: *Puccinia ankarensis*, *P. lactucarum*, *P. prenanthis-purpureae*
Lactuca viminea: *Puccinia ankarensis*
Lappa: *Puccinia calcitrapae*
Lapsana: *Puccinia lapsanae*
Lapsana communis: *Puccinia lapsanae*
Lapsana intermedia: *Puccinia lapsanae*
Lathyrus annuus: *Uromyces pisi-sativi*
Lathyrus pratensis: *Uromyces pisi-sativi*
Lathyrus roseus: *Uromyces pisi-sativi*
Lathyrus tuberosus: *Uromyces viciae-fabae*
Lavatera punctata: *Puccinia malvacearum*
Lecokia cretica: *Puccinia lecokiae*
Lens esculenta: *Uromyces vesicatorius*, *U. viciae-fabae*
Leontice leontopetaloides: *Uromyces vesicatorius*, *Aecidium leontices*
Leontodon crispus: *Puccinia leontodontis*, *P. recondita*
Leontodon asperrimus: *Puccinia leontodontis*
Lepidium: *Puccinia trabutii*
Lepidium draba: *Puccinia isiacae*
Limonium: *Uromyces limonii*
Limonium gmelini: *Uromyces limonii*
Linum: *Melampsora lini* var. *lini*
Linum hirsutum: *Melampsora lini* var. *lini*
Linum mucronatum: *Melampsora lini* var. *lini*
Linum nervosum: *Melampsora lini* var. *lini*
Linum nodiflorum: *Melampsora lini* var. *lini*
Linum usitatissimum: *Melampsora lini* var. *lini*
Lolium: *Puccinia graminis*, *P. hordei*
Lolium multiflorum: *Puccinia graminis*
Lolium persicum: *Puccinia graminis*
Lolium perenne: *Puccinia graminis*, *P. striiformis*
Lolium rigidum: *Puccinia graminis*, *P. recondita*
Lonicera caucasica: *Puccinia festucae*

- Lotus corniculatus*: *Uromyces anthyllidis*, *U. pisi-sativi*
Lotus gebelia: *Uromyces pisi-sativi*
Luzula: *Puccinia obscura*
Luzula campestris: *Puccinia obscura*
Lysimachia vulgaris: *Puccinia limosae*
Lythrum salicaria: *Puccinia minutissima*
Mahonia aquifolium: *Cumminsia mirabilissima*
Malva: *Puccinia malvacearum*
Malva neglecta: *Puccinia malvacearum*
Malva sylvestris: *Puccinia malvacearum*
Malus: *Gymnosporangium tremelloides*
Malus sylvestris: *Gymnosporangium clavariiforme*, *G. tremelloides*
Malvella sherardiana: *Puccinia sherardiana*
Medicago: *Uromyces striatus*
Medicago falcata: *Uromyces pisi-sativi*, *U. striatus*, *U. trifolii-repentis* var. *fallens*
Medicago littoralis: *Uromyces pisi-sativi*
Medicago lupulina: *Uromyces pisi-sativi*, *U. trifolii-repentis* var. *fallens*
Medicago minima: *Uromyces striatus*
Medicago papillosa: *Uromyces pisi-sativi*
Medicago polymorpha: *Uromyces pisi-sativi*
Medicago rigidula: *Uromyces magnusii*, *U. pisi-sativi*, *U. trifolii-repentis* var. *fallens*
Medicago sativa: *Uromyces pisi-sativi*, *U. striatus*
Medicago varia: *Uromyces pisi-sativi*, *U. striatus*
Melica ciliata: *Puccinia graminis*
Melilotus neapolitanus: *Uromyces baeumlerianus*
Melilotus officinalis: *Uromyces baeumlerianus*
Mentha: *Puccinia menthae*
Mentha longifolia: *Puccinia menthae*
Mentha pulegium: *Puccinia menthae*
Mentha spicata: *Puccinia menthae*
Mercurialis annua: *Puccinia cynodontis*, *Aecidium marcii*
Mespilus germanica: *Gymnosporangium clavariiforme*, *G. confusum*
Michauxia campanuloides: *Coleosporium tussilaginis*
Michauxia tchihatcheffii: *Coleosporium tussilaginis*
Micromeria fruticosa: *Puccinia menthae*
Minuartia: *Uromyces alsinis*
Minuartia hamata: *Uromyces alsinis*, *U. scleranthi*
Minuartia juniperina: *Uromyces scleranthi*
Minuartia meyeri: *Uromyces alsinis*, *U. petitmenginii*, *U. scleranthi*
Minuartia recurva: *Puccinia hysteriiformis*

Muscari: Uromyces muscari
Muscari comosum: Uromyces muscari
Myagrurn perfoliatum: Puccinia isiacae
Myosotis lithospermifolia: Puccinia recondita
Noaea: Uromyces salsolae
Noaea mucronata: Uromyces salsolae
Noaea spinosissima: Uromyces salsolae
Notobasis syriaca: Puccinia calcitrapae, P. notobasidis
Omphalodes: Puccinia mertensiae
Omphalodes cappadocica: Pucciniastrum brachybotrydis
Onobrychis: Uromyces pisi-sativi
Onobrychis altissima: Uromyces pisi-sativi
Onobrychis armena: Uromyces pisi-sativi
Onobrychis cappadocica: Uromyces pisi-sativi
Onobrychis galegifolia: Uromyces pisi-sativi
Onobrychis hypargyrea: Uromyces pisi-sativi
Onobrychis radiata: Uromyces pisi-sativi
Onobrychis transcaucasica: Uromyces pisi-sativi
Onobrychis viciafolia: Uromyces pisi-sativi
Ononis spinosa: Uromyces ononidis
Onosma molle: Puccinia onosmaticola
Onosma sericea: Puccinia onosmatis
Opopanax orientalis: Puccinia opopanax
Origanum vulgare: Puccinia menthae
Ornithogalum: Puccinia liliacearum
Ornithogalum pyrenaicum: Puccinia liliacearum
Paeonia mascula: Puccinia martianoffiana
Papaver rhoeas: Melampsora magnusiana
Parietaria judaica: Uromyces tenuicutis
Pedicularis comosa: Coleosporium tussilaginis
Petrorrhagia alpina: Uromyces dianthi
Petrosimonia brachiata: Uromyces salsolae
Peucedanum pisidicum: Puccinia libani
Phalaris arundinacea: Puccinia sessilis
Phaseolus vulgaris: Uromyces appendiculatus
Phillyrea latifolia: Zaghouania phillyreae
Phleum graecum: Puccinia graminis
Phleum pratense: Puccinia graminis, P. poarum, P. striiformis
Phlomis: Puccinia phlomidis
Phlomis armeniaca: Puccinia phlomidis, P. stapfiana
Phlomis capitata: Aecidium phlomidis
Phlomis kurdica: Puccinia phlomidis

Phlomis pungens: *Puccinia phlomidis*
Phlomis russeliana: *Puccinia phlomidis*
Phragmites: *Puccinia phragmitis*
Phragmites australis: *Puccinia graminis*, *P. magnusiana*, *P. phragmitis*, *P. tepperi*
Phragmites communis: *Puccinia phragmitis*, *P. trabutii*
Phryna ortegioides: *Puccinia phrynae*
Picnomon acarna: *Puccinia acarnae*, *P. calcitrapae*, *P. cnici*
Picris hieracioides: *Puccinia hieracii* var. *hieracii*
Picris pauciflora: *Puccinia hieracii* var. *hieracii*
Picris strigosa: *Puccinia hieracii* var. *hieracii*
Pilosella: *Puccinia hieracii* var. *piloselloidarum*
Pilosella auriculoides: *Puccinia hieracii* var. *piloselloidarum*
Pilosella fallax: *Puccinia hieracii* var. *piloselloidarum*
Pilosella piloselloides: *Puccinia hieracii* var. *piloselloidarum*
Pilosella verruculata: *Puccinia hieracii* var. *piloselloidarum*
Pimpinella: *Puccinia pimpinellae*
Pimpinella anthriscoides: *Puccinia pimpinellae*
Pimpinella aurea: *Puccinia pimpinellae*
Pimpinella corymbosa: *Puccinia pimpinellae*
Pimpinella cretica: *Puccinia pimpinellae*
Pimpinella kotschyana: *Puccinia pimpinellae*
Pimpinella olivierioides: *Puccinia pimpinellae*
Pimpinella rhodantha: *Puccinia pimpinellae*
Pimpinella tragium: *Puccinia pimpinellae*
Pinus brutia: *Melampsora populnea*
Pinus halepensis: *Melampsora populnea*
Pinus nigra: *Endocronartium pini*, *Melampsora populnea*
Pinus pinaster: *Melampsora populnea*
Pinus sylvestris: *Endocronartium pini*
Pistacia: *Pileolaria terebinthi*
Pistacia lentiscus: *Pileolaria terebinthi*, *Uromyces polygoni*
Pistacia terebinthus: *Pileolaria terebinthi*
Pistacia vera: *Pileolaria terebinthi*
Pisum sativum: *Uromyces striatus*, *U. viciae-fabae*
Plantago major: *Puccinia cynodontis*
Poa: *Puccinia poarum*
Poa annua: *Puccinia graminis*, *P. poarum*
Poa bulbosa: *Puccinia poarum*, *Uromyces dactylidis*
Poa longifolia: *Puccinia graminis*
Poa nemoralis: *Puccinia brachypodii* var. *poae-nemoralis*, *P. graminis*, *P. poarum*

- Polygonum*: *Puccinia polygoni-amphibii* var. *convolvuli*, *Uromyces polygoni*, *U. polygoni-avicularis*
Polygonum alpestre: *Uromyces polygoni*
Polygonum alpinum: *Puccinia polygoni-amphibii* var. *convolvuli*
Polygonum arenarium: *Puccinia polygoni-amphibii* var. *convolvuli*
Polygonum arenastrum: *Puccinia polygoni-amphibii* var. *convolvuli*, *Uromyces polygoni*
Polygonum aviculare: *Uromyces polygoni-avicularis*
Polygonum bellardii: *Puccinia bistortae*, *Uromyces polygoni*, *U. polygoni-avicularis*
Polygonum bistorta: *Puccinia bistortae*, *U. polygoni-avicularis*
Polygonum cognatum: *Uromyces polygoni*, *U. polygoni-avicularis*
Polygonum convolvuli: *Puccinia polygoni-amphibii* var. *convolvuli*
Polygonum lapathifolium: *Puccinia bistortae*, *P. polygoni-amphibii* var. *convolvuli*, *U. polygoni-avicularis*
Polygonum luzuloides: *Uromyces polygoni-avicularis*
Polygonum maritimum: *Uromyces polygoni*
Polygonum polycnemoides: *Uromyces polygoni-avicularis*
Polypogon monspeliensis: *Puccinia coronata* var. *avenae*
Polypogon viridis: *Puccinia graminis*
Populus: *Melampsora populnea*
Populus alba: *Melampsora allii-populina*, *M. pulcherrima*
Populus nigra: *Melampsora allii-populina*, *M. populnea*
Populus pyramidalis: *Melampsora occidentalis*
Populus tremula: *Melampsora allii-populina*
Potentilla: *Frommeella tormentillae*, *Phragmidium fragariae*, *P. hendersonii*, *P. potentillae*
Potentilla argentea: *Phragmidium potentillae*
Potentilla aucheriana: *Phragmidium potentillae*
Potentilla crantzii: *Phragmidium potentillae*
Potentilla erecta: *Phragmidium potentillae*
Potentilla inclinata: *Phragmidium potentillae*
Potentilla recta: *Phragmidium potentillae*
Potentilla reptans: *Phragmidium potentillae*
Potentilla speciosa: *Phragmidium potentillae*
Prangos: *Puccinia libani*, *P. libanotidis*, *P. plicata*
Prangos denticulata: *Puccinia plicata*
Prangos ferulacea: *Puccinia libani*
Prangos pabularia: *Puccinia libani*, *P. plicata*
Prunus: *Tranzschelia discolor*
Prunus amygdalus: *Tranzschelia pruni-spinosae*
Prunus armeniaca: *Tranzschelia discolor*, *T. pruni-spinosae*

Prunus cerasifera: *Tranzschelia pruni-spinosae*
Prunus divaricata: *Tranzschelia discolor*
Prunus domestica: *Tranzschelia pruni-spinosae*
Prunus persica: *Tranzschelia pruni-spinosae*
Prunus spinosa: *Tranzschelia discolor*, *T. pruni-spinosae*
Pyrola media: *Pucciniastrum pyrolae*
Pyrus communis: *Gymnosporangium fuscum*, *G. sabiniae*, *G. tremelloides*
Pyrus elaeagnifolia: *Gymnosporangium sabiniae*
Pyrus malus: *Gymnosporangium tremelloides*
Pyrus syriaca: *Gymnosporangium clavariiforme*
Quercus: *Cronartium quercuum*
Quercus coccifera: *Cronartium quercuum*
Ranunculus caucasicus: *Puccinia recondita*
Ranunculus oxyspermus: *Uromyces dactylidis*
Ranunculus repens: *Puccinia ranunculi*
Rhagadiolus angulosus: *Puccinia hysteriorum*
Rhagadiolus hedyppnois: *Puccinia rhagadioli*
Rhagadiolus stellatus: *Puccinia hysteriorum*
Rhamnus: *Puccinia coronata* var. *avenae*
Rhamnus cathartica: *Puccinia coronata* var. *avenae*
Rhamnus oleoides: *Puccinia mesnieriana*
Rhamnus pallasii: *Puccinia coronata* var. *avenae*
Rhinanthus angustifolius: *Coleosporium tussilaginis*
Rhinanthus minor: *Coleosporium tussilaginis*
Rhynchospora elephas: *Coleosporium tussilaginis*
Rosa: *Phragmidium mucronatum*, *P. tuberculatum*
Rosa canina: *Phragmidium mucronatum*
Rosa dumalis: *Phragmidium mucronatum*, *P. tuberculatum*
Rosa foetida: *Phragmidium kamschatkae*, *P. mucronatum*
Rosa horrida: *Phragmidium mucronatum*
Rosa montana: *Phragmidium mucronatum*
Rosa pimpinellifolia: *Phragmidium mucronatum*, *P. rosae-pimpinellifoliae*
Rosa pulverulenta: *Phragmidium mucronatum*, *P. mucronatum*
Rosa villosa: *Phragmidium mucronatum*, *P. mucronatum*
Rosa sulphurea: *Phragmidium bulbosum*
Rubia tinctoria: *Puccinia rubiae-tataricae*
Rubus: *Phragmidium acuminatum*, *P. bulbosum*, *P. violaceum*
Rubus caesius: *Kuehneola uredinis*, *Phragmidium violaceum*
Rubus canescens: *Kuehneola uredinis*, *Phragmidium acuminatum*, *P. rubi-saxatilis*, *P. violaceum*
Rubus discolor: *Phragmidium violaceum*
Rubus fruticosus: *Phragmidium violaceum*

- Rubus hirtus*: *Phragmidium violaceum*
Rubus idaeus: *Phragmidium rubi-idaei*
Rubus sanctus: *Arthuriomyces peckianus*, *Phragmidium bulbosum*, *P. violaceum*
Rumex: *Puccinia acetosae*, *Puccinia phragmitis*, *Uromyces rumicis*
Rumex acetosa: *Puccinia acetosae*,
Rumex acetosae: *Uromyces acetosae*
Rumex acetosella: *Puccinia acetosae*, *P. pachyphloea*, *Uromyces polygoni-avicularis*, *U. rumicis*
Rumex acetoselloides: *Uromyces acetosae*
Rumex alpinus: *Uromyces rumicis*
Rumex angustifolius: *Uromyces rumicis*
Rumex conglomeratus: *Uromyces rumicis*
Rumex cristatus: *Uromyces rumicis*
Rumex obtusifolius: *Uromyces rumicis*
Rumex patientia: *Puccinia acetosae*, *U. rumicis*
Rumex pulcher: *Uromyces rumicis*
Rumex scutatus: *Puccinia acetosae*, *P. pedunculata*, *Uromyces rumicis*
Rumex tmoleus: *Puccinia acetosae*
Rumex tuberosus: *Puccinia acetosae*, *Uromyces rumicis*
Sagina: *Puccinia arenariae*
Salix: *Melampsora epitea* var. *epitea*, *M. salicis-albae*
Salix alba: *Melampsora salicis-albae*
Salix babylonica: *Melampsora salicis-albae*
Salix caprea: *Melampsora salicis-albae*
Salix cinerea: *Melampsora salicis-albae*
Salix pseudomedemii: *Melampsora salicis-albae*
Salix triandra: *Melampsora salicis-albae*
Salvia: *Puccinia nigrescens*, *P. salviae*
Salvia amasiana: *Puccinia nigrescens*
Salvia cadmica: *Puccinia stipae* var. *stipae*
Salvia cryptantha: *Puccinia bithynica*, *P. stipae* var. *stipae*, *P. stipina*
Salvia euphratica: *Puccinia glechomatis*, *P. stipae* var. *stipae*
Salvia multicaulus: *Puccinia nigrescens*, *P. stipae* var. *stipae*, *P. stipina*
Salvia rosifolia: *Puccinia glechomatis*, *P. stipina*
Salvia verticillata: *Puccinia nigrescens*
Salvia viridis: *Puccinia stipina*
Sanguisorba: *Phragmidium sanguisorbae*
Sanguisorba minor: *Phragmidium sanguisorbae*
Sanguisorba officinalis: *Xenodochus carbonarius*
Saponaria: *Uromyces gypsophilae*
Sarcopoterium spinosum: *Phragmidium sanguisorbae*, *P. sarcopoterii*

Satureja: *Puccinia menthae*
Satureja macrantha: *Puccinia menthae*
Saxifraga: *Puccinia saxifragae*
Saxifraga sibirica: *Puccinia saxifragae*
Scabiosa palaestina: *Aecidium scabiosae*
Scabiosa rotata: *Aecidium scabiosae*
Scariola: *Puccinia lactucarum*
Scariola viminea: *Puccinia lactucarum*
Scirpus maritimus: *Uromyces lineolatus*
Scorzonera: *Puccinia scorzonerae*
Scorzonera cana: *Puccinia scorzonerae*
Scorzonera cinerea: *Puccinia podospermi*, *P. scorzonerae*
Scorzonera eriophora: *Puccinia scorzonerae*
Scorzonera mollis: *Puccinia scorzonerae*
Scorzonera tomentosa: *Puccinia scorzonerae*
Secale cereale: *Puccinia graminis*, *P. recondita*
Secale montanum: *Puccinia graminis*
Sempervivum globiferum: *Endophyllum sempervivi*
Senecio aquaticus: *Coleosporium tussilaginis*
Senecio eriospermus: *Puccinia glomerata*,
Senecio orientalis: *Coleosporium tussilaginis*, *Puccinia glomerata*
Senecio vernalis: *Puccinia dioicae* var. *silvatica*, *P. uralensis*
Serratula cerinthifolia: *Puccinia heterophyllae*, *P. schirajewskii*, *P. serratulae*
Serratula cerinthifolia: *Puccinia hieracii* var. *hieracii*
Serratula oligocephala: *Puccinia hieracii* var. *hieracii*
Serratula radiata: *Puccinia hieracii* var. *hieracii*
Setaria viridis: *Puccinia graminis*
Silau carvifolius: *Puccinia opopanacis*
Silene: *Puccinia arenariae*, *P. behenis*, *Uromyces behenis*, *U. silenes*
Silene alba: *Puccinia behenis*, *Uromyces behenis*, *U. verruculosus*
Silene arguta: *Puccinia behenis*
Silene italica: *Puccinia arenariae*, *Uromyces behenis*, *U. verruculosus*,
Aecidium otitis
Silene laxa: *Uromyces inaequialtus*
Silene marschallii: *Uromyces behenis*
Silene odontopetala: *Puccinia behenis*
Silene rhynchocarpa: *Puccinia arenariae*, *Uromyces silenes-ponticae*
Silene spergulifolia: *Uromyces silenes-ponticae*, *U. verruculosus*
Silene vulgaris: *Puccinia arenariae*, *Uromyces behenis*
Silybum marianum: *Puccinia mariana*
Sisymbrium altissimum: *Puccinia trabutii*

- Sisymbrium officinale*: *Puccinia trabutii*
Smilax excelsa: *Puccinia smilacis*
Smyrniium cordifolium: *Puccinia smyrnii*
Smyrniium rotundifolium: *Puccinia smyrnii*
Solidago: *Uromyces sommerfeltii*
Solidago virgaurea: *Coleosporium asterum*.
Sophora jaubertii: *Uromyces sophorae-flavescentis*
Sorbus aria: *Gymnosporangium tremelloides*
Sorbus aucuparia: *Gymnosporangium cornutum*, *G. tremelloides*
Sorbus subfusca: *Gymnosporangium juniperi*
Sorbus umbellata: *Gymnosporangium cornutum*
Stachys: *Puccinia betonicae*, *P. hariotii*
Stachys annua: *Puccinia betonicae*, *P. stachydis*
Stachys iberica: *Puccinia betonicae*
Stachys citrina: *Puccinia betonicae*
Stachys cretica: *Puccinia betonicae*
Stachys grandiflora: *Puccinia betonicae*
Stachys setifera: *Puccinia vossii*
Staelina lobelii: *Puccinia phaeopappi*
Statice limonium: *Uromyces limonii*
Statice sinuata: *Uromyces limonii*
Stipa holosericea: *Puccinia stipae* var. *stipae*
Stipa pontica: *Puccinia stipae* var. *stipae*
Stipa szowitsiana: *Puccinia wolgensis*
Stipagrostis plumosa: *Puccinia stipina*
Suaeda maritima: *Uromyces chenopodii*
Symphytum: *Melampsorella symphyti*
Symphytum asperum: *Puccinia recondita*
Taeniatherum crinitum: *Puccinia striiformis*
Tanacetum: *Puccinia tanaceti*
Tanacetum argenteum: *Puccinia tanaceti*
Tanacetum balsamita: *Puccinia absinthii*, *P. balsamitae*
Tanacetum balsamitoides: *Puccinia balsamitae*
Tanacetum cilicicum: *Puccinia balsamitae*, *P. tanaceti*
Tanacetum densum: *Puccinia tanaceti*
Tanacetum nitens: *Puccinia tanaceti*
Tanacetum vulgare: *Puccinia tanaceti*
Taraxacum: *Puccinia dioicae* var. *dioicae*, *P. hieracii* var. *hieracii*, *P. variabilis*
Taraxacum assemani: *Puccinia hieracii* var. *hieracii*
Taraxacum bessarabicum: *Puccinia hieracii* var. *hieracii*
Taraxacum montanum: *Puccinia hieracii* var. *hieracii*

- Taraxacum officinale*: *Puccinia hieracii* var. *hieracii*
Taraxacum serotinum: *Puccinia hieracii* var. *hieracii*
Taraxacum syriacum: *Puccinia hieracii* var. *hieracii*
Telekia speciosa: *Coleosporium telekiae*
Teucrium chamaedrys: *Puccinia annularis*, *P. chamaedryos*, *P. majoricensis*
Teucrium divaricatum: *Puccinia annularis*
Teucrium orientale: *Puccinia constricta*
Teucrium polium: *Puccinia annularis*, *P. constricta*, *P. majoricensis*
Thalictrum minus: *Puccinia recondita*
Thesium arvense: *Puccinia thesii*
Thesium compressum: *Puccinia thesii*
Thesium macranthum: *Puccinia thesii*
Thesium procumbens: *Puccinia thesii*
Thesium stelleroides: *Puccinia thesii*
Thesium tauricolum: *Puccinia thesii*
Thlaspi violascens: *Puccinia thlaspeos*
Thymelaea aucheri: *Puccinia salihae*
Thymus fallax: *Puccinia serpylli*, *P. stipina*
Thymus fedtschenkoi: *Puccinia serpylli*, *P. tendae*
Thymus kotschyanus: *Puccinia serpylli*, *P. stipae* var. *stipina*
Thymus transcaucasicus: *Puccinia serpylli*
Tordylium apulum: *Puccinia pimpinellae*
Trachomitum venetum: *Melampsora apocyni*
Tragopogon: *Puccinia hysteriorum*
Tragopogon aureus: *Puccinia hysteriorum*
Tragopogon latifolius: *Puccinia hysteriorum*
Tragopogon longirostris: *Puccinia striiformis*
Trifolium: *Uromyces trifolii*
Trifolium alpestre: *Uromyces trifolii*
Trifolium ambiguum: *Uromyces trifolii*
Trifolium fragiferum: *Uromyces trifolii*
Trifolium nigrescens: *Uromyces trifolii*
Trifolium pannonicum: *Uromyces trifolii*
Trifolium pratense: *Uromyces pisi-sativi*, *U. striatus*, *U. trifolii*, *U. trifolii-repentis* var. *fallens*
Trifolium repens: *Uromyces trifolii*
Trifolium resupinatum: *Uromyces trifolii*
Trigonella cancellata: *Uromyces trigonellae*
Trigonella fischeriana: *Uromyces trigonellae*
Trigonella foenum-graecum: *Uromyces trigonellae*
Trigonella monantha: *Uromyces trigonellae*
Trigonella monspeliaca: *Uromyces trigonellae*

Triticum: *Puccinia graminis*, *P. recondita*, *P. striiformis*
Triticum aestivum: *Puccinia graminis*, *P. hordei*
Triticum carthlicum: *Puccinia graminis*, *P. striiformis*
Triticum dicoccon: *Puccinia graminis*
Triticum sativum: *Puccinia graminis*, *P. recondita*
Triticum turgidum: *Puccinia graminis*
Triticum vulgare: *Puccinia graminis*
Tulipa armena: *Puccinia prostii*
Tulipa hayati: *Puccinia prostii*
Tulipa sintenisii: *Puccinia liliacearum*
Tussilago farfara: *Coleosporium tussilaginis*, *Puccinia poarum*
Umbilicus erectus: *Puccinia umbilicicola*
Urginea maritima: *Uromyces muscari*
Urtica dioica: *Puccinia caricicola*
Vaccaria pyramidata: *Uromyces gypsophilae*
Valeriana: *Uromyces valerianae*
Valeriana dioscoridis: *Uromyces valerianae*
Veratrum album: *Uromyces veratri*
Verbascum: *Uromyces thapsi*
Veronica armena: *Puccinia ardahanensis*
Vicia: *Uromyces pisi-sativi*, *U. viciae-fabae*
Vicia cracca: *Uromyces fischeri-eduardi*, *U. viciae-fabae*, *U. viciae-cracca*
Vicia faba: *Uromyces viciae-fabae*
Vicia freyniana: *Uromyces fischeri-eduardi*
Vicia hybrida: *Uromyces viciae-fabae*
Vicia narbonensis: *Uromyces viciae-fabae*
Vicia sativa: *Uromyces viciae-fabae*
Vicia villosa: *Uromyces fischeri-eduardi*, *U. viciae-fabae*
Vigna sinensis: *Uromyces vignae*
Vinca: *Puccinia vincae*
Vinca herbacea: *Puccinia anatolica*
Vinca major: *Puccinia vincae*
Viola: *Puccinia violae*
Viola canica: *Puccinia violae*
Viola kitaibeliana: *Puccinia violae*
Viola odorata: *Puccinia cynodontis*, *P. violae*
Viola sieheana: *Puccinia violae*
Xanthium spinosum: *Puccinia xanthii*
Xanthium strumarium: *Puccinia helianthi*, *P. xanthii*
Zea mays: *Puccinia sorghi*
Ziziphora clinopodioides: *Puccinia ziziphorae*
Zoegea leptaura: *Puccinia buharica*

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