barley for the presence of both rusts. In a total of 37 collections on barley, var. Tritici alone occurred in 23 collections, var. Secalis alone in 6 collections, and both varieties together in 8 collections. The isolates of var. Secalis occurred in collections from B.C., Alta., Man., Ont., Que., and N.B. In one locality only, Fredericton, N.B., was there evidence that barley was severely rusted by var. Secalis. Although var. Secalis is widely distributed in Canada it is definitely of importance secondary to that of var. Tritici (T. Johnson).

Infection Studies with Aecia from Berberis and Rhamnus in 1949

Isolations from Aecia on Berberis

Isolations from 15 collections of aecia from Eastern Canada produced only varieties Secalis and Agrostidis of Puccinia graminis. Only var. Agrostidis occurred in the 7 collections from the Maritime Provinces, and this variety was present also in 2 of the collections from Ont. and in 1 from Que. In these two provinces, however, var. Secalis, which occurred in 6 of the 8 collections, was the predominant one (T. Johnson).

Isolations from Aecia on Rhamnus species

Aecial collections were obtained on Rhamnus cathartica from P.E.I., N.B., Que., Ont., and Man., on R. saxatilis and R. tinctoria in Man. and on R. Frangula in N.B. From the 17 collections on R. cathartica, Puccinia coronata var. Festucae was isolated from 2 collections, var. Avenae from 11 collections, and a variety tentatively designated as Bromi (Muehleth.)[x] from 7 collections. Var. Bromi was isolated also from collections made on R. saxatilis and R. tinctoria. Puccinia coronata var. Agrostis was the only variety of crown rust isolated from R. Frangula.

The following physiologic races of the variety Avenae were isolated from the 11 above mentioned collections of that variety: race 2 (3 isolates), race 3 (7), race 6 (3), race 38 (2), and race 4 (1).

Two of the isolates of var. Bromi, one from R. saxatilis at Morden, Man., the other from R. cathartica at Kemptville, Ont., were tested for pathogenicity to several varieties of cereals. The results demonstrate the existence of physiologic races within var. Bromi (B. Peturson).

[x]Owing to the ability of this strain to attack rye, barley, and even wheat, as well as certain species of Bromus, its proper nomenclature must be left for future decision.