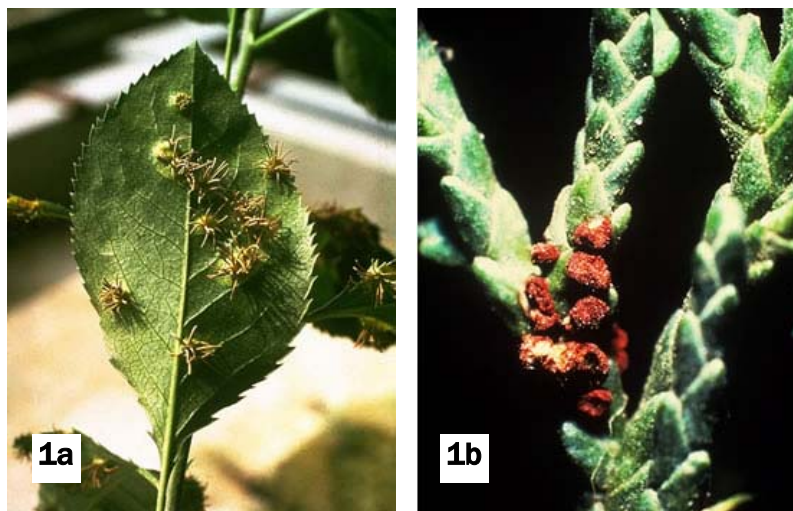
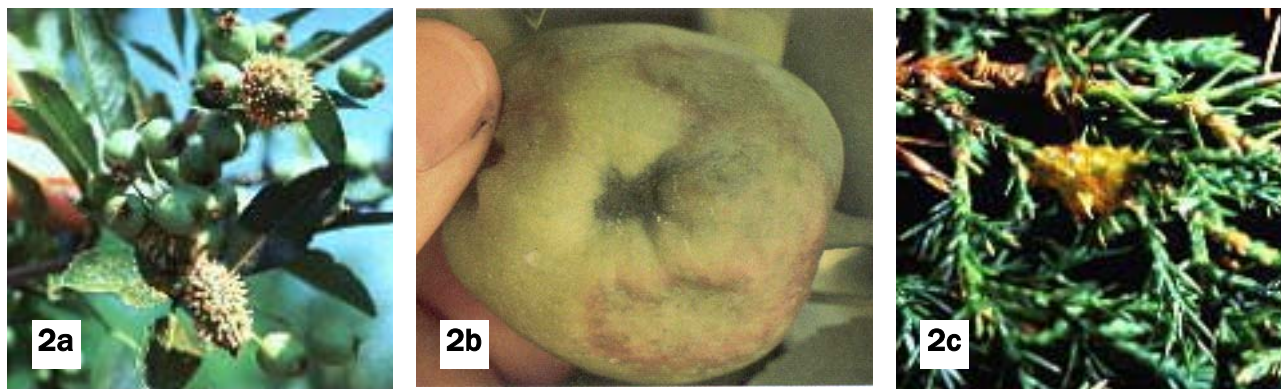


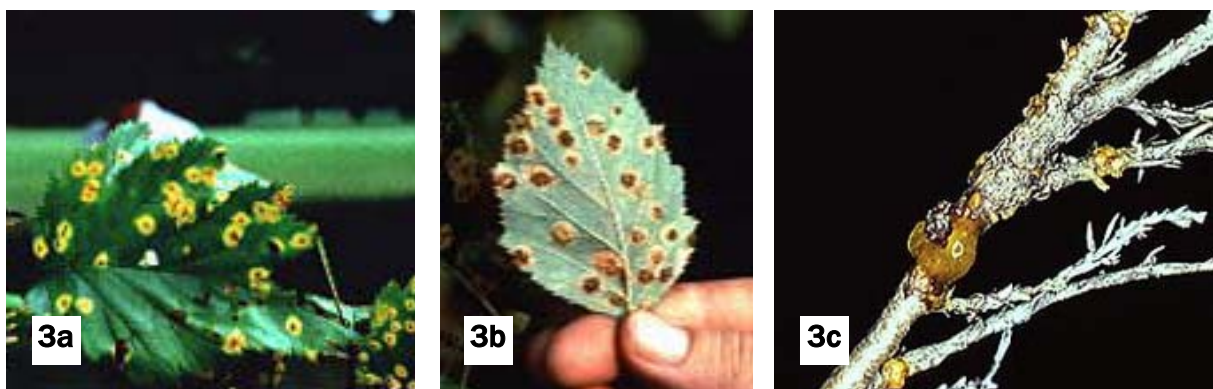
Appendix 1: Pictures of symptoms caused by *Gymnosporangium* spp.



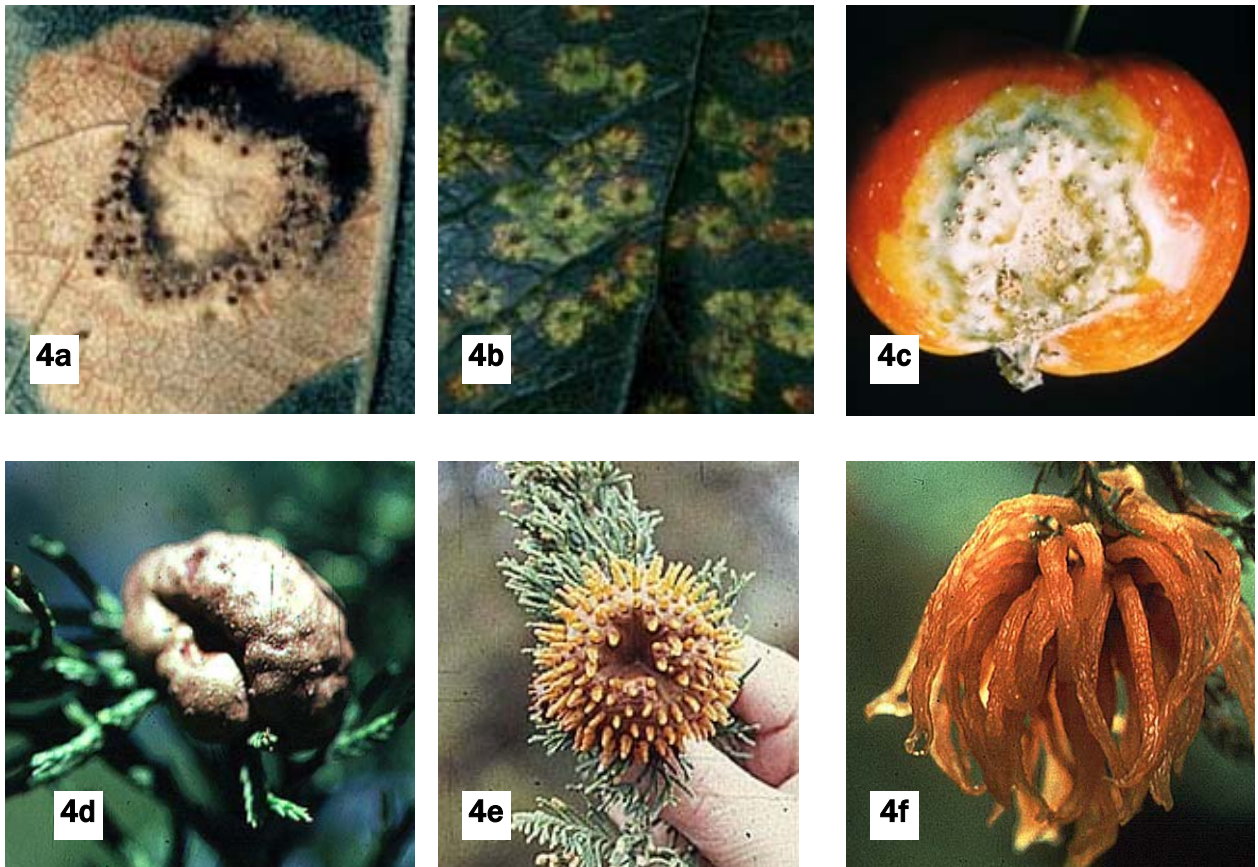
Web Fig. 1: Symptoms caused by *G. asiaticum* on under surface pear leaf (a) and on *J. chinensis* (b).



Web Fig. 2 Symptoms caused by *G. clavipes* on hawthorn fruit (a), on a Delicious apple (b) on Juniper (c).



Web Fig. 3 Symptoms caused by *G. globosum* on upper leaf surface of hawthorn (a), on lower surface of hawthorn leaf (b) and on juniper.

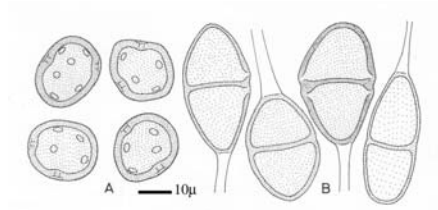


Web Fig. 4 Symptoms caused by *G. juniperi-virginianae* on underside of apple leaf showing aecia (a), on upper surface of apple leaf (b), on apple fruit showing aecia (c), on juniper showing gall formation (d), on juniper with emerging teliohorns on galls (e), and on juniper showing gall with mature teliohorns (f).

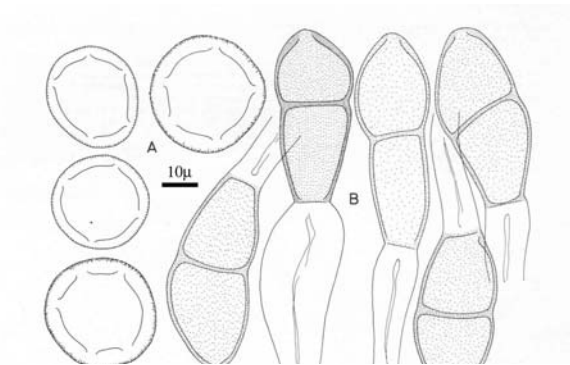


Web Fig. 5 Symptoms caused by *G. yamadae* on lower apple leaf showing aecia (a).

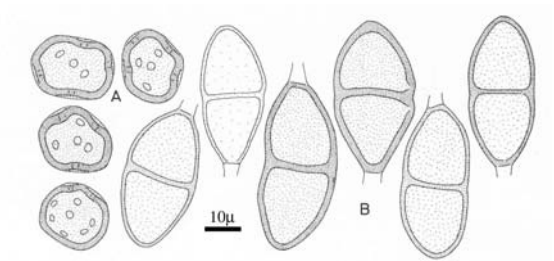
Appendix 2: Illustrations of spores of *Gymnosporangium* spp. (after Laundon, 1977)



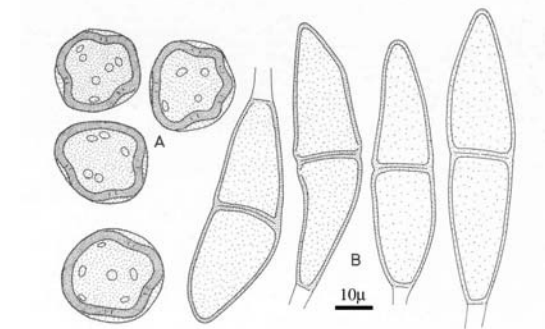
Web Fig. 6 Aeciospores (A) and teliospores (B) of *Gymnosporangium asiaticum*.



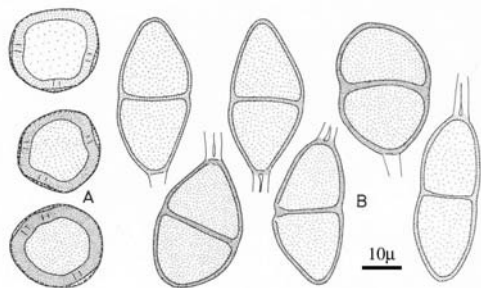
Web Fig. 7 Aeciospores (A) and teliospores (B) of *Gymnosporangium clavipes*.



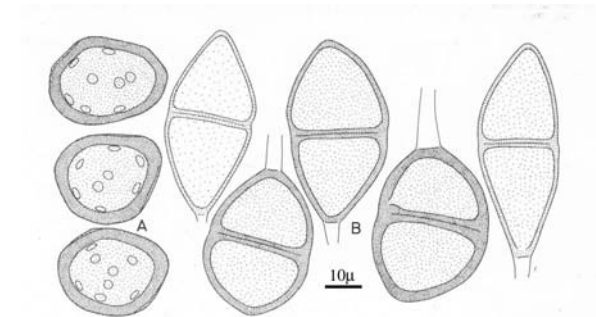
Web Fig. 8 Aeciospores (A) and teliospores (B) of *Gymnosporangium globosum*.



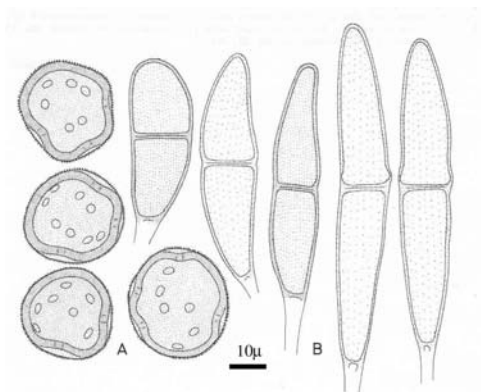
Web Fig. 9 Aeciospores (A) and teliospores (B) of *Gymnosporangium juniperi-virginianae*.



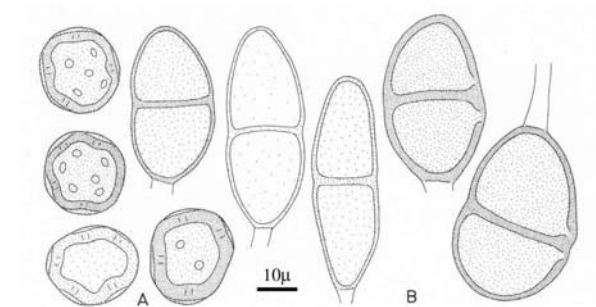
Web Fig. 10 Aeciospores (A) and teliospores (B) of *Gymnosporangium yamadae*.



Web Fig. 11 Aeciospores (A) and teliospores (B) of *Gymnosporangium fuscum*.



Web Fig. 12 Aeciospores (A) and teliospores (B) of *Gymnosporangium clavariiforme*.



Web Fig. 13 Aeciospores (A) and teliospores (B) of *Gymnosporangium confusum*.