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The cover photo shows two of the five stages in the life cycle of *Puccinia graminis* (wheat rust). The structure at the top of this cross section of a barberry leaf is a spermogonium which is producing spermatia. These fuse with receptive hyphae to form aecia (bottom structure) which in turn produce aeciospores on the bottom surface of the barberry leaf. When the aeciospores are mature they are disseminated by the wind and infect the wheat plant.