

*ASPIDIUM SPINULOSUM* var. *INTERMEDIUM* (Muhl.) D. C. Eaton (Spinulose Wood Fern), and *ASPIDIUM MARGINALE* (L.) Sw. (Evergreen Wood Fern). Both of these ferns thrive well in a moist, typical "cedar swamp," with a mucky soil. They are usually shaded in such a habitat by cedar, hemlock, black ash and mountain maple. The latter species is impatient of too dense shade and will thrive in a fairly open situation. The former will also stand exposure, but as a rule thrives better if the shade is fairly dense. The glandular character of the indusium of this fern varies with the environment. These ferns also thrive well in clay loam, especially on the face of slopes. In this location they are shaded by hard maple, beech and ironwood, with cedars and an occasional hemlock.

*ASPIDIUM CRISTATUM* (L.) Sw. (Crested Shield Fern). This fern prefers a mucky soil; its locations overlap those of *Aspidium Thelypteris* and *Onoclea*. Trees peculiar to such a situation, such as ash, cedar and mountain maple furnish the necessary shade. In comparison with its associates, however, it appears always to select a somewhat higher station and is found growing on logs and around stumps. It stands exposure fairly well; this may be due to the fact that the sun exercises a directive influence on the position of the pinnae.

*POLYSTICHUM ACROSTICHOIDES* (Michx.) Schott. (Christmas Fern), and *ADIANTUM PEDATUM* L. (Maidenhair). These ferns are both very sensitive to exposure and are found only where the shade is very dense. Their habitat seldom overlaps with *Aspidium spinulosum* and *A. marginale* in their cedar swamp location, but often does in the hardwood station. Thus on a slope where the humus overlies a clay loam the four ferns may often be found. A dense shade is produced in a typical location by maple and beech, while an occasional hemlock and basswood may also be present. In such a habitat, *P. acrostichoides* will almost invariably be found towards the top of the slope, while *A. pedatum* selects the rather more moist and sheltered location at the foot.

*ASPLENIUM FILIX-FEMINA* (L.) Bernh. (Lady Fern). This fern is found at its best when growing at the edge of a mucky soil location. Under these circumstances it will be shaded by cedars and hemlocks, but trees peculiar to the transition zone, such as birch, soft elm and basswood, will also be found. It stands exposure to the sun very well. Sometimes it is found associated with *Aspidium cristatum*, but, in general, it prefers a habitat that is wetter.

*ASPLENIUM ANGUSTIFOLIUM* Michx. (Narrow-leaved Spleenwort). In a station examined in Peel County this fern was growing