

Prepared by Jerry Copeland, copyrighted 2012

This key requires the use of a microscope that has a function to make measurements of the field of vision.

NOTE: some exceptions may occur within the four major classes though the species sought ought be confined to the major class.

The basic definitions are:

ADNATE: base of leaf attached directly to stem

DECURRENT: base of leaf grows along the stem

CUNEATE: a wedge shaped growth of the leaf base along the stem.

Measurements of the strobili should probably be done with the strobilus removed from the plant stem and laid horizontally before viewing and measuring. Ideally the strobilus should be fully matured as immature strobili will be smaller.

The measurements given in the key represent the range of length or width of the plant structure so noted.

Generally the measurement of length is from the tip to the observable or determinable base of the structure.

For the strobili, measurement of length is roughly from the base of the strobilus to the tip of uppermost sporophyll.

Adnation is generally represented as a green leaf base that is attached to a darker colored stem.

SELAGINELLA: TETRAGONOSTACHYS: KEY TO LEAF BRISTLES 1.6 mm TO 2.0 mm

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1. Leaf bases decurrent

*S. densa*

SELAGINELLA: TETRAGONOSTACHYS: KEY TO LEAF BRISTLES 1.1 mm TO 1.5 mm

1. Leaf bases decurrent only

A. Leaf bristle with conspicuous pubescence (puberulent), 1-1.9 mm

*S. densa*

B. Leaf bristle generally smooth to slightly pubescent, 0.4-1.25 mm

*S. standleyi*

2. Leaf bases both adnate, on upperside main stems, and decurrent, on underside main stems

A. Leaf bristle smooth or with a few teeth

*S. scopulorum*

B. Leaf bristle puberulent

*S. rupestris*

SELAGINELLA: TETRAGONOSTACHYS: KEY TO LEAF BRISTLES 0.5 mm TO 1.0 mm

1. Leaf bases decurrent only

A. Rhizophores 0.2-0.35 mm wide, leaf bristle 0.4-1.25 mm long, on plants forming compact mats

*S. standleyi*

B. Rhizophores 0.15-0.3 mm wide, leaf bristle 0.25-1 mm long, on plants forming festoon-like mats

*S. underwoodii*

2. Leaf bases both adnate, on upperside main stems or on young branches, and decurrent, on underside main stems or entirely on main stems

A. Leaf bristle smooth or with a few teeth

1. Leaves same size all around main stems, 2-3.4 mm long

*S. underwoodii*

2. Leaves distinctly longer on underside of main stems, 2.5-4.3 mm long

*S. scopulorum*

B. Leaf bristle puberulent

*S. rupestris*

SELAGINELLA: TETRAGONOSTACHYS: KEY TO LEAF BRISTLES under 0.5 mm

1. Leaf bases adnate only

*S. mutica*

2. Leaf bases decurrent only

A. Rhizophores under 3.5 mm wide

1. Rhizophores 0.2-0.35 mm wide, leaf bristle 0.4-1.25 mm long, on plants forming compact mats

*S. standleyi*

2. Rhizophores 0.15-0.3 mm wide, leaf bristle 0.25-1 mm long, on plants forming festoon-like mats

*S. underwoodii*

B. Rhizophores 0.35-0.55 mm wide

*S. watsonii*

3. Leaf bases both adnate, on upperside main stems or on young branches, and decurrent, on underside main stems or entirely on main stems

A. Leaves 2.5-4.5 mm long, leaf margins long-ciliate 0.05-0.17 mm, leaf bristle puberulent

*S. rupestris*

B. Leaves 2-3.4 mm long, leaf margins entire or short ciliate 0.02-0.07 mm, leaf bristle smooth

*S. underwoodii*