

72. **KERNIA** Nieuwl., Am. Midl. Nat. 4: 379. 1916.

= *Magnusia* Sacc., *Michelia* 1: 123. 1878.

Anamorph: *Scopulariopsis*, *Graphium*.

Colonies growing slowly, moderately or rapidly, dark, composed of brown, septate hyphae. Ascomata cleistothecial, superficial, spherical, obovate or irregular in shape, black or nearly so, non-ostiolate, smooth or partly covered with brushes of thick-walled, often apically circinate hairs; peridium composed of several layers of flattened, dark cells, *textura angularis*. Asci unitunicate, 8-spored, irregularly disposed, subglobose or obovate, evanescent. Ascospores one-celled, hyaline and dextrinoid when young, straw-coloured

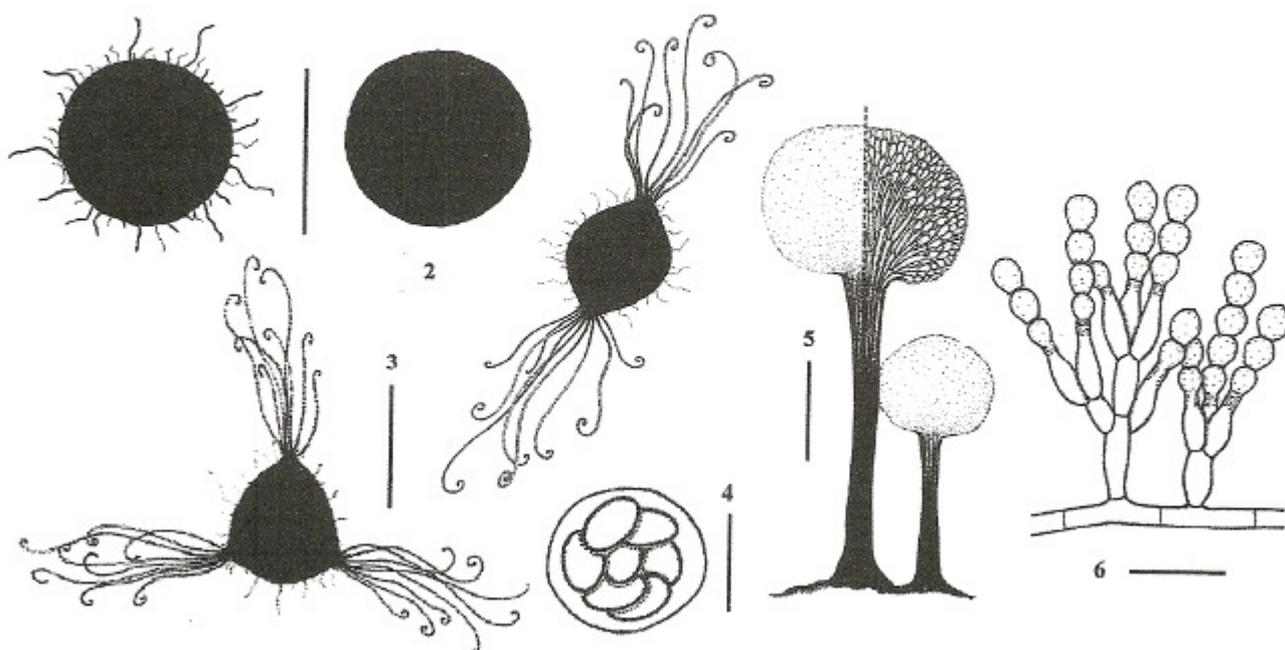
or pale brown when mature, obovate, ellipsoidal or reniform, aseptate, smooth-walled, with an often indistinct germ pore, occasionally with two germ pores, with a prominent de Bary bubble. Conidiophores mononematous, occasionally synnematous, simple or branched. Conidiogenous cells annelidic, arising directly on vegetative hyphae or on conidiophores, cylindrical or flask-shaped. Conidia one-celled, in chains, usually ovoid with a truncate base.

Type species: *Kernia nitida* (Sacc.) Nieuwl.

REFERENCES: Malloch & Cain (1971c), von Arx et al. (1988).

KEY TO THE SPECIES OF *KERNIA*

1. Ascospores reniform, triangular or heart-shaped 2
Ascospores ellipsoidal or obovate 3
2. Ascomata glabrous; ascospores 3-4.5(-5) x 3-3.5(-4) µm *K. peruviana*
Ascomata hairy; ascospores 5-7 x 4-6 x 4-5.5 µm *K. hippocrepida*
3. Ascospores 4-5 x 2.5-3.5 µm, nearly hyaline *K. hyalina*
Ascospores distinctly pigmented 4
4. Ascomata triangular or ovate in the lateral view, at the rounded ends with single or brushes of long, setae-like, often circinate hairs *K. nitida*
Ascomata usually spherical 5
5. Ascospores with two germ pores 6
Ascospores with a germ pore 7
6. Ascospores 6.5-8 x 3.5-5 µm; absence of anamorph *K. ovata**
Ascospores 4.5-7 x 3.5-5 µm; *Scopulariopsis* anamorph *K. pachypleura*



Kernia spp. 1-3. Ascomata (1, *K. hippocrepida*; 2, *K. hyalina*, *K. peruviana*, and *K. retardata*; 3, *K. nitida*). 4. Ascus. 5, 6. Anamorphs (5, *Graphium*; 6, *Scopulariopsis*). Bars: 1-3= 200 µm; 4, 6= 10 µm; 5= 25 µm.

- Ascomata glabrous; ascospores $5-7 \times 4-5.5 \mu\text{m}$ *K. cauquensis**
 Ascomata hairy; ascospores $5-6 \times 3.5-4.5 \mu\text{m}$ *K. setadispersa**
 Ascomata glabrous to hairy; ascospores $4.5-7 \times 3.5-5 \mu\text{m}$ *K. retardata*

Not reported from soil.

Kernia hippocrepida Malloch & Cain, Can. J. Bot. 49: 856. 1971.

Anamorph: *Scopulariopsis* sp., *Graphium* sp.

Colonies cottony, growing moderately quick, hyaline, with brown growth rings, zonate; reverse brown. Ascomata black, spherical, $150-250 \mu\text{m}$ diam, hairy. Asci $10-16 \mu\text{m}$ diam. Ascospores reniform to subcircular in face view, elliptical in side view, $5-7 \times 4-6 \times 4-5.5 \mu\text{m}$, with two apical germ pores. Conidiophores solitary or more commonly forming synnemata, penicillately branched at the apex, $16-90 \times 2.5-3.5 \mu\text{m}$, hyaline to dark brown, septate. Conidiogenous cells borne in groups of two to six, flask-shaped to nearly cylindrical, $8.5-28 \times 2-3.5 \mu\text{m}$, hyaline. Conidia hyaline, pyiform to clavate, $3.5-12.5 \times 2-4 \mu\text{m}$, with a truncate base, smooth, rounded at the apex, forming slimy masses at the apices of the conidiophores.

DISTRIBUTION: Canada, Germany, USA.

REFERENCE: Malloch & Cain (1971c).

Kernia hyalina Malloch & Cain, Can. J. Bot. 49: 860. 1971.

Anamorph: *Scopulariopsis* sp.

Colonies growing slowly, restricted, greenish grey; reverse colorless. Ascomata spherical, $55-175 \mu\text{m}$ diam, glabrous. Asci $7-10.5 \mu\text{m}$ diam. Ascospores hyaline, very pale yellowish in mass, broadly obovate, $4-5 \times 2.5-3.5 \mu\text{m}$, with a single germ pore at the narrow end. Conidiophores arising from the aerial or vegetative mycelium, usually simple, rarely branched, bearing one to several conidiogenous cells at the apex, hyaline. Conidiogenous cells borne singly on the mycelium or in clusters at the tips of the conidiophores, $5.5-8 \times 2-3 \mu\text{m}$, swollen just above the base, abruptly constricted

Anamorph: *Scopulariopsis* sp., *Graphium* sp.

Colonies growing slowly, brownish grey, velvety; reverse light grey. Ascomata triangular, ellipsoidal or variable in shape, $150-240 \mu\text{m}$ diam, hairy; hairs olivaceous brown, hyphae-like, forming clusters usually in the angles, 1-15 or more in number, straight, often sharply bent or geniculate, rigid, smooth and thick-walled, remotely septate, unbranched, ending to a straight or sharply circinate or contorted tip. Asci $12-18 \times 7-10 \mu\text{m}$. Ascospores ovoid to ellipsoidal, $(4-4.5-6 \times 3-4 \mu\text{m})$, slightly asymmetrical, one germ pore at each end. Conidiophores arising from the aerial hyphae or basal mycelium, $8-50 \times 3-4 \mu\text{m}$, hyaline to pale brown, simple or usually branched, often aggregated to form small synnemata, bearing conidiogenous cells in groups of 2-6 or more, without metulae, or irregularly branched with metulae measuring $(4-9-18 \times 2.5-3 \mu\text{m})$, or sometimes terminating in dense penicilli. Conidiogenous cells cylindrical, $(7-12-20 \times 2.5-3 \mu\text{m})$. Conidia hyaline, yellowish brown in mass, ovoid to wedge-shaped, or nearly cylindrical, sometimes spherical, $5-7 \times 2.5-5.5 \mu\text{m}$, truncate at the apex, smooth, forming a compact columnar chain.

