

## ON VONARXIA, KAZULIA AND OTHER FUNGI WITH STAUROCONIDIA

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Four monotypic genera have been described for Deuteromycetes with superficial, crustose or pulvinate, setose conidiomata and hyaline, septate stauroconidia consisting of a main axis and 2–3 apical branches. The types of *Fumagopsis* Spegazzini (1910), *Vonarxia* Batista & Bezerra (1960) and *Kazulia* Nag Raj (1977) are specimens collected in South America. All develop superficially on living or decaying leaves. *Phalangispora constricta* Nawawi & Webster (1982) has been described from a pure culture isolated from conidia collected at Malaya.

*Fumagopsis triglyphioides* Speg. has been redescribed by Van der Aa & Van Oorschot (1985) from the type specimen collected in 1909 in Argentina on leaves of *Lucuma neriifolia*. It forms a pigmented, setose, superficial mycelium with pustulate or crustose conidiomata covered with dark, thick, apparently aseptate setae. The conidia develop singly on ampulliform or irregular conidiogenous cells with a distinct collar or beak. The conidia are composed of an aseptate or 1-septate main axis and 2–3 apical branches, which are constricted at the septa. The base of the conidia is slightly truncate.

Van der Aa & Van Oorschot (1985) compared *F. triglyphioides* with *Kazulia vagans* (Speg.) Nag Raj and *Phalangispora constricta* Nawawi & Webster, but not with *Vonarxia anacardii* Batista & Bezerra, which was collected on leaves of *Anacardium occidentale* in Brazil. All these species form superficial, sporodochium- or synnema-like conidiomata with a single or a small number of septate setae. The superficial mycelium is pale and not setose. The conidiogenous cells are elongate, cylindrical or slightly clavate, arranged in fascicles and form at their apex a whorl of conidia by simultaneous or sympodial budding. The conidia are rather similar to those of *F. triglyphioides* having a usually 1-septate main axis and 1–3 apical branches which are partly constricted at the septa.

The description of *Vonarxia anacardii* given by Batista & al. (1960) is rather inadequate. They interpreted the main axis of the conidia to represent the upper part of branched conidiophores and considered the conidia to be filiform or whip-like with some transverse septa. The type specimen was studied by the second author of the present paper, when he stayed at the Mycological Institute of the University of Recife in 1960. The material was rather poor, only a few conidiomata could be found, but the available slides proved to be useful. The conidiogenous cells were found to be arranged in superficial fascicles and the conidia are formed in small, apical clusters. Their main axis has a size of  $8\text{--}14 \times 1.8\text{--}3 \mu\text{m}$  and the apical branches are  $12\text{--}35 \mu\text{m}$  long and composed of  $7\text{--}14 \mu\text{m}$  long and  $1.5\text{--}2 \mu\text{m}$  broad cells.

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A good description and adequate figures of a similar fungus were published by Nag Raj (1977), based on the type specimen of *Ypsilonia vagans* Speg., collected in Brazil on leaves of *Spiraea cantonensis*. The fungus was classified in the new genus *Kazulia* and was considered to be the anamorph of a Chaetothyriaceae (*Zukalia* spec.). *Kazulia* has to be synonymized with *Vonarxia*. The following nomenclature change is proposed:

*Vonarxia vagans* (Speg.) Van der Aa, *comb. nov.*

*Ypsilonia vagans* Speg. in Rev. Mus. La Plata, sect. Bot. 15: 35. 1908 (basionym) — *Kazulia vagans* (Speg.) Nag Raj in Can. J. Bot. 55: 1621. 1977.

*Vonarxia anacardii* is closely related to *V. vagans*, which can be distinguished only by the usually 1-septate segments of the apical branches of the conidia; these are predominantly aseptate in the former species.

*Cladosporothyrium* Katumoto (1984) and *Zelopelta* Sutton & Gaur (1984) have conidiomata without setae. The conidiogenous cells and the conidia are reminiscent to those of *Fumagopsis triglyphioides*. The type specimens of both genera have been collected in Nepal: *C. nepalense* Katumoto on living leaves of *Myrsine semiserrata*, *Z. thrinacospora* Sutton & Gaur on dead leaves of *Hedera nepalensis*. These two species are congeneric.

*Phalangispora constricta* was described by Nawawi & Webster (1982) from a culture. Nothing is known about its way of growing on the natural substrate. In culture it forms synnematosous or sporodochial conidiomata with septate setae. The conidiogenous cells and conidia are similar to those of *V. anacardii* and *V. vagans*, but larger, especially broader. The branching of the conidia is also more irregular.

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