

First report of entomogenous fungus *Hirsutella versicolor* Petch from Iran. Dr. R. Zare* and Dr. M. Ghazavi; Research Department of Botany and Agricultural Entomology, Iranian Research Institute of Plant Protection, P. O. Box 1454, Tehran 19395, Iran. simplicillium@yahoo.com*.

Entomogenous genus, *Hirsutella* Pat., is divided into two sections based on the presence or absence of synnemata. Some 35 mostly synnematous species are described (Minter, D. W. and B. L. Brady, Trans. Br. Mycol. Soc. 74(2): 271-282, 1980). Leaf hoppers collected from Shastkola forest in Gorgan (Golestan Province, see Fig. 1a) collected in September 2007 and those collected from *Megophthalmus scabripennis* (*Acer* leaf hopper) Gilan Province in Summer 2005 were examined. Specimens were identified *H. versicolor* Petch (Petch, T. 1931. Trans. Br. Mycol. Soc. 16: 227) following microscopic examination. Various specimens of this fungus were collected from leaf hoppers by Petch (Petch, *l. c.*). Despite all efforts the fungus could not be cultured on potato dextrose agar (PDA) or malt-extract agar (MA). A brief description together with a figure (Fig. 1) of this fungus is presented in this paper. Mycelium forms a pale yellow to greyish brown mat radiating from the leaf hopper to the leaf surface. Conidiophores reduced to sessile conidiogenous cells arising singly or sometimes 2-3 in verticillate or non-verticillate arrangements. Conidiogenous cells mostly monophialidic (with one slender, straight neck) or polyphialidic (with 2-3 such necks), hyaline, smooth 13-22 μm in length, swollen up to 3.2-4.2 μm wide near the base, tapering rapidly to one to three slender straight necks each about 0.5 μm wide. Conidia aseptate, hyaline, smooth, more or less falcate fusiform measuring 4.2-5.5 \times 1.5-2 μm , formed solitary or in groups at the apex of the neck, embedded in a mucous sheath. At the apex of some phialides a globose conidium, about 4 μm (Fig. 1f) may be seen, that is described by Petch as a secondary spore. Perfect state of this fungus is described under *Calonectria pruinosa* Petch (Petch, *l. c.*) that was later combined in *Torrubiella* (Minter and Brady, *l. c.*).

Measurements reported in this paper are slightly smaller than those reported by Petch and those specimens collected from Gilan Province had smaller dimensions compared with those collected from Golestan Province. Secondary spores reported by Petch were produced by all specimens examined (Fig. 1f, h). In specimens collected from Gilan Province thick

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hyphae resembling chlamydospores were seen (Fig. 1g). Slide preparation of the specimen collected from Gilan Province is preserved in the Fungus Collection of the Ministry of Jihad-e-Agriculture (IRAN 12669F).

Another important entomogenous fungus, *Lecanicillium muscarium* (Petch) Zare & W. Gams, is isolated from the same specimen collected from Shaskola forest which is preserved in the culture collection of the Ministry of Jihad-e-Agriculture at the senior author's address under the accession code IRAN 1214C. This is a new record of *L. muscarium* from Iran on a leaf hopper. Both *L. muscarium* and *H. versicolor* are considered important natural biocontrol agents of this insect.