Abstract

In order to identify fungi causing leaf spot, samples were collected from different localities in south of Kerman province and cultivated in Patato Dextrose Agar (PDA) after surface disinfection by sodium hypochlorite. After fungal growth, microscopic slides prepared in lactic acid 50% and morphological characters of conidiophores, conidiogenous cells and conidia of each isolate examined using Olympus CH22 light microscopy. Extraction of genomic DNA from selected taxa performed based on CTAB method. Quality and quantity of extracted DNA investigated through agarose gel electrophoresis and spectrophotometry. ITS region of the ribosomal DNA amplified using ITS1 and ITS4 primers and PCR products were sequenced. Sequences of taxa compared with other correlate and similar sequences in GenBank (NCBI) using MEGA6 software. With morphological and molecular data, three species of the genus Alterntaria including A. alternata (on Lonicera caprifolium), A. infectoria (on Cardaria draba) and A. tenuissima (on Brassica sp.) and four other taxa including Bipolaris spicifera (on Digera muricata), Chalastospora gossypii (on Brassica sp. and Sinapis arvensis), Ulocladium sp. (on host from Apiaceae) and Xenodidymella sp. (on Polygonum aviculare and Silybum marianum) were identified. Exept A. tenuissima, other taxa are isolated for the fisrt time from related host plants in Iran. Xenodidymella is new at the genus level for the mycobiota of Iran and reprted for the fisrt time. Although nucleotide sequence of the ITSrDNA region of the taxon on Digera muricata (False Amaranthus) showed similarity with nucleotide sequence of Bipolaris spicifera deposited in GenBank, but conidia in specimen examined in this research were ellipsoid to sylindrical and their width were slithly more. Therephore until achievement to more exact data, the taxon is introduced as Bipolaris spicifera. Ulocladium sp. was differ both in morphological features and nucleotide sequence from others with similar sequences deposited in GenBank including U. botrytis, U. consortiale and U. oblongo-obovoideum and probably be a new undescribed species in this genus. Sequence of other parts of genom including gpd and tef-1a should be determined for exact identification of the species.

Keywords: Taxonomy, Morphological and molecular characteristics, Imperfect fungi

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Title

Identification of dematiaceous hyphomycetes causing leaf spot on grasslands and some weeds in south of Kerman province

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