Research Note

FIRST REPORT OF LEPTOSPHAERULINA CRASSIASCA *(ASCOMYCOTA) IN PUERTO RICO*[1,2]

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The genus *Leptosphaerulina* McAlpine (1902) belongs to the order Pleosporales, which includes all nonlichenized ascomycetes with bitunicate asci. This order has often been classified in the class Loculoascomycetes or as Ascoloculares (Von Arx, 1987). A characteristic feature of Loculoascomycetes is a peculiar structure of the apical wall of the ascus. The inner wall is especially thick at the apex and is partially penetrated by a pore into which the protoplast extends. This structure is called ocular chamber or nassace (Abler, 2003; Graham and Lutrell, 1961).

A great number of *Leptosphaerulina* species have been described on endemic plants of North and South America, Europe, Asia and Australia (Abler, 2003). The large number of described species is the result of the wide variation in ascospore size and septation (Irwin and Davis, 1985). *Leptosphaerulina crassiasca* (Sechet) C. R. Jackson & D. K. Bell (Jackson and Bell, 1968) has been described as a common pathogen of peanut *(Arachis hypogaea* L.), causing diseases known as pepper spot and leaf scorch diseases (Wu and Hanlin, 1991). *Leptosphaerulina* spp. are common fungi that have been reported to colonize several turfgrass species (Couch, 1995). According to Minter et al. (2001) there are no previous reports of *L. crassiasca* for Puerto Rico. In this work the fungus was collected on three different sampling dates exposing Petri dishes (100 × 15 mm) containing Rose Bengal Agar supplemented with chloramphenicol. Plates were exposed for 15 minutes at three different periods (morning, evening, and night) at Barrio Carreras in Añasco, Puerto Rico. Samplings were conducted to characterize the diversity of fungal spores in the lower atmosphere in Western Puerto Rico. Pure cultures were characterized by using Potato Dextrose Agar (PDA), Sabouraud Dextrose Agar (SDA) and 20% V-8 Agar (Miller, 1955) as specified in taxonomic keys by Von Arx (1987) and Graham and Lutrell (1961).

Taxonomy

Leptosphaerulina crassiasca (Sechet) C. R. Jackson and D.K. Bell (Jackson and Bell, 1968).
≡ *Pleospora crassiasca* Sechet (Sechet, 1955).
= *Leptosphaerulina arachidicola* J. Yen, M. J.Chen & K. Huang (Yen et al., 1956).
Anamorph: None reported

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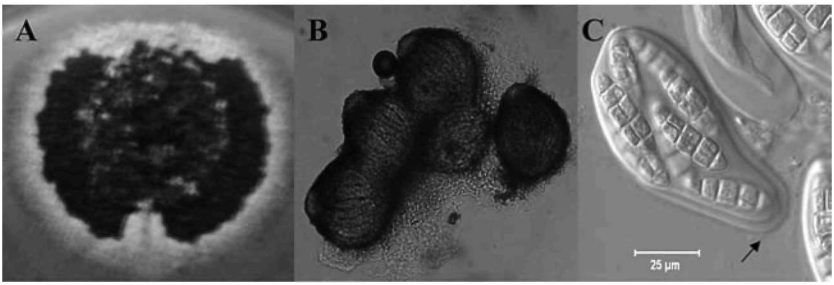

FIGURE 1 A-C. Seven-day cultures of *Leptosphaerulina crassiasca* growing at 25° C on 20% V-8 agar. A. zonated colony; B. pseudothecia (20×); C. bitunicate asci containing ascospores (36 µm × 12 µm) with longitudinal and transverse septa and nassace (arrow) under Nomarsky microscopy (60×) (Photographs by G. Rosado).

On PDA, after seven days of incubation, the fungus produced brown, erose, zonated, plaited fast growing colonies (5.2 mm/day). Abundant aggregate ascomata (pseudothecia) developed over the colony surface. Asci were bitunicated, saccate, containing eight ascopores each. Ascopores (33 µm × 11µm) were hyaline, ellipsoid and dictiosporus with four to five transverse septa and zero to two longitudinal septa of variable position. On SDA, after seven days of incubation, the fungus developed beige, erose plaited colonies. Neither fruiting bodies nor other reproductive structures were observed.

After seven days of incubation on 20% V-8, the ascomycete developed dark brown, zonated fast growing colonies (6.2 mm/day) but these were not plaited (Figure 1 A). Brown pseudothecia on aggregates were not abundant (Figure 1 B). Asci were bitunicated, saccate containing eight ascospores each as previously described for cultures growing on PDA (Figure 1 C).

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