2(1). Ascus epiplasm purple in Melzer's reagent.
1. M. iodotingens subsp. **iodotingens**
2'(1). Ascus epiplasm not so reacting.
2. M. iodotingens subsp. **canariensis**

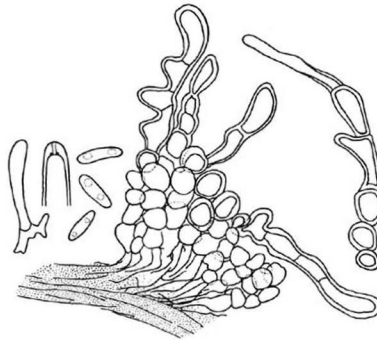
3(1'). Ascospores 3.7-5.9 (-6.6) x 1.5 µm; apothecia on line stromata on leaves of Hedera helix.
3. M. hederae
3'(1'). Ascospores (5.6-) 6.3-8.1 x 1.4-2.2 µm; apothecia on petioles, midribs, leaf blades, and mummied stone fruits. **4. Moellerodiscus sp. 1881**

1. Moellerodiscus IODOTINGENS Kohn & Korf, **sp. nov.** subsp. **IODOTINGENS**

RECENT TAXONOMIC TREATMENTS: None.

PREVIOUS MACARONESIAN RECORDS: None.

Apothecia solitaria vel dispersa, in foliorum laminis, venis, petiolisque putrescentibus stromate infectis; receptaculum cupulatum vel plano-convexum depressionem centralem praebens, 2-3 mm in diam., discus ochraceo-brunneis, in sicco brunneolescens; receptaculi parietes disco pallidius ochraceo-brunnei, furfuracei; stipes 1-2 mm longus, saltem ad basin atrobrunneus. Excipulum ectale 20-60 µ latum, in gelatina inclusum, ex zonis duabus compositum, zona interiore ex textura porrecta ad superficiem receptaculi parallela formata, parietibus tenuibus, cellulis 2-3 µ latis, zona exteriore ex textura globulosa vel angulari pallide brunnea formata in catenis ad superficiem receptaculi parallelis ordinata, cellulis 3-8 µ latis, gelatina in substantia reagente Melzerana coerulescente post usum 10% KOH antecedentum; cellulae extimae pilos moniliformes ad 70 µ longos hyalinos vel parietibus pallide brunneis praeditos, interdum granulari-incrustatos, efferentes, quibus pilis abundantissimis ad marginem ubi fere semper parietibus brunneis praediti sunt; stipitis cellulae ectales ad axin stipitis perpendiculariter extentae, in gelatina inclusae, pilos moniliformes parietibus brunneis praeditos efferentes, cellulis parietibus atrobrunneis praeditis ad basin stipitis repertis. Excipulum medullare in latitudi-variabile, ex textura intricata parietibus pallide brunneis praedita ad superficiem receptaculi plus minusve parallela, cellulis 1-2 µ latis, plerumque granulari-incrustatis, cellularum contento in substantia reagente Melzerana purpureo; stipitis excipulum medullare eo receptaculi simile,



M. iodotingens subsp. **iodotingens,** young ascus, with repeating crozier, CUP-MM 2091, x 1000; ascus apex showing blueing of ascus pore channel wall in Melzer's reagent after pretreatment in 10% KOH, 3 ascospores, excipulum near the margin, and a hair from lower on the receptacle, CUP-MM 1880, x 1000.

cellulis 2-3 µ latis exceptis. Asci clavati, ex uncis enati, 8-spori, 50-60 x 5-7 µ, epiplasmate in substantia reagente Melzerana purpureo, apice incrassato (3 µ), pori canalis pariete dilute J+ sine usu KOH antecedente, reactione aucta cum usu 10% KOH antecedente. Ascosporae ellipsoideae, hyalinae, biguttulati, 7-8.8 (-10.2) x 2-3 µ, biseriati, germinatione tubos germinales formantes in conformatione quae "crux coptica" dicitur. Paraphyses subclavatae, 1 µ latae, simplices, septatae, ascos in longitudine non excedentes.

APOTHECIA solitary to scattered on decaying stromatized leaf blades, veins, and petioles; receptacle cupulate to plano-convex with a central depression, 2-3 mm in diam; disc ochraceous brown drying to tan; surface of receptacle paler ochraceous brown than disc, furfuraceous; stipe 1-2 mm long, dark brown at least at base. ECTAL EXCIPULUM 20-60 µm wide, bound in gel, of two zones: the inner zone of thin-walled textura porrecta turning out perpendicularly to the surface of the receptacle, cells 2-3 µm broad; outer zone of pale brown

textura globulosa to textura angularis, oriented in chains perpendicular to the surface of the receptacle, cells 3-8 µm broad, gel turning blue in Melzer's reagent following pretreatment in 10% KOH; outermost cells giving rise to hyaline to light brown-walled moniliform hairs up to 70 µm long, occasionally granularly roughened, most abundant at the margin where hairs are almost always brown-walled; ectal cells of stipe turning out perpendicular to the stipe axis, bound in gel, giving rise to brown-walled moniliform hairs, dark brown-walled cells present at the base of stipe. MEDULLARY EXCIPULUM variable in breadth, of pale brown-walled textura intricata oriented more or less parallel to receptacle surface, cells 1-2 µm broad, usually granularly roughened, cell contents purple in Melzer's reagent; medullary excipulum of the stipe same as that of the receptacle except cells 2-3 µm broad. ASCI clavate, arising from croziers, 8-spored, 50-60 x 5-7 µm, epiplasm purple in Melzer's reagent, apex thickened (up to 3 µm), pore channel wall faintly J+ without KOH pretreatment, reaction enhanced with pretreatment in 10% KOH. ASCOSPORES biseriate, ellipsoid, hyaline, biguttulate, 7.0-8.8 (-10.2) x 2.0-3.0 µm, germinating in a "Coptic cross" configuration much later followed by production of a single germ tube. PARAPHYSES subclavate, 1.0 µm broad, simple, septate, not exceeding asci in length.

HOLOTYPE: R.P. Korf, L.M. Kohn, N. Korf & A.Y. Rossman, on decaying, stromatized leaf blades, veins, and petioles, cultivated garden, Cabo da Praia, Terceira, Azores, Portugal, 8.iv.1978. (CUP-MM 1880) (K, TFC: ISOTYPES.) (ISOTYPES will also be distributed in Korf & Gruff, Discomycetes Exsiccati.)

KNOWN MACARONESIAN DISTRIBUTION

AZORES.

Flores. CUP-MM 2070, 2091, 2146, 2188 (TFC).

São Miguel. CUP-MM 1739.

Terceira. CUP-MM 1880 (holotype, isotypes), 1883, 1923, 2062.

MADEIRA.

Madeira. CUP-MM 2271.

SUBSTRATA: on decaying, stromatized leaf blades, veins and petioles of Myrica faya, ? Pittosporum sp., Hedera helix, etc., and on herbaceous stems.

Notes: The tissues blueing in Melzer's reagent (at least after pretreatment in 10% KOH) and the biguttulate ascospores distinguish this species from M. tenuistipes (Schroet.) Dumont. The larger ascospores and abundant moniliform hairs easily distinguish it from M. musae Dumont. Reactions in Melzer's reagent are particularly striking in this species: with pretreatment in 10% KOH the ectal excipulum consistently turns light to medium blue in Melzer's reagent; without pretreatment cell contents of all tissue zones are purple-brown in that reagent.

The "Coptic cross" spore germination on agar was consistently noted for many of the collections that were cultured, both in this subspecies and in M. iodotingens subsp. canariensis (see photograph under that subspecies). We have no explanation for this elaborate form of germination, usually seen within 24 hours. Only after 48 to 72 hours (at ambient room temperatures in our field hotel/laboratories) does further hyphal development ensue, with usually a single, long germtube observed from any one spore. Except for melanized cells around the base of the stipe, association with stromatized substrata is purely circumstantial, since no stromatic tissue has been produced in our cultures derived from ascospores.

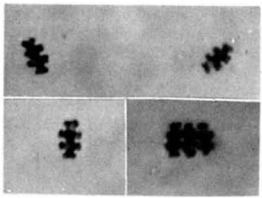
2. **Moellerodiscus iodotingens** Kohn & Korf in Kohn subsp. **CANARIENSIS** Kohn, **subsp. nov.**

RECENT TAXONOMIC TREATMENTS: None.

PREVIOUS MACARONESIAN RECORDS: None.

Subspeciei typicae fere omni ex parte conveniens, sed apotheciis aurantio-brunneis, excipulo ectali zona interiore carente, et contento cellularum in zonis omnibus receptaculi non purpurascente in substantia reagente Melzerana differt. Huius subspeciei distributio ad Insulas Canarienses limitata.

Agreeing with the description of Moellerodiscus iodotingens subsp. iodotingens in all respects except for the orange-brown color of the apothecia, lack of an inner zone of the ectal excipulum, and lack of a purple reaction in Melzer's reagent of cell contents in all zones of the receptacle. Distribution of the subspecies is confined to the Canary Islands.



M. iodotingens subsp. **canariensis**, 6 ascospores (3 separated, 3 discharged in a group) germinating on water agar in "Coptic cross" configuration 12 hours after being discharged, CUP-MM 1309, x 1000 (photo: R.P. Korf).

HOLOTYPE: R.P. Korf, W.C. Denison, L.M. Kohn & M.A. Sherwood, on leaf blades of Prunus lusitanica L., west of Fuente de las Pulgas, Las Yedras, Monte de las Mercedes, Tenerife, Canary Islands, Spain, 12.i.1976. (CUP-MM 545)

KNOWN MACARONESIAN DISTRIBUTION

CANARY ISLANDS.

La Palma. CUP-MM 670.

Tenerife. CUP-MM 296, 445, 446, 545 (holotype), 601 (TFC), 607, 608, 1181, 1186, 1309, 1310.

SUBSTRATA: On leaf blades and petioles of Prunus lusitanica L. and of undetermined hosts.

Notes: Our field notes for spore germination in the collection from La Palma indicate germination by a single germ tube in 24 hours. All other collections for which spore germination was observed showed the typical "Coptic cross" germination shown in the photograph above, just as in the typical subspecies. It is certainly possible that we overlooked "Coptic cross" germination in the La Palma collection, but normal germ tubes are not recorded by us for other collections until at least 48 to 72 hours after discharge. The possibility of MM-670 representing yet another taxon cannot be ignored.

3. Moellerodiscus HEDERAE Korf & Kohn, **sp. nov.**

RECENT TAXONOMIC TREATMENTS: None.

PREVIOUS MACARONESIAN RECORDS: None.