

Sporocybe lycopersici, n. sp.—Tufts olive-green, flocci erect, twice or thrice septate, about 5 mk. in diameter. Heads terminal globose, 20—30 mk. across. Spores numerous, sub-globose or ovate, black, 3 mk. long.

The Phoma is preceded by conidia and macroconidia.

CONIDIA: *Cladosporium lycopersici*.—Hypæ tufted, septate, irregular in outline at their apices, springing by their bases from a black spot; compacted mycelium, spores abundant, cylindrical, black, 1—3 septate, slightly pointed at their extremities; 10—30 mk. long, by 8—10 mk. wide.

MACRO-CONIDIA: *Macrosporium lycopersici*.—Flocci, well developed, black, septate, somewhat flexuous, producing abundantly sooty-black irregular pyriform to sub-quadrate muriform spores, which vary in size from 10—70 mk. long, by 10—20 mk. wide.

STYLOSPORES: *Phoma destructiva*.—Perithecia carbonaceous, minute, globose, spherical clustered spores, hyaline, oval, cylindrical, binucleate, 5—6 mk. long, by 1.5—1 mk. wide.

Another disease which sometimes but much more rarely attacks Tomatos while still growing is due to a *Dactylium* very closely allied to, if not identical with, *D. roseum*, B., from which it differs in producing its spores in threes, and in growing parasitically upon a living plant. This disease seems more especially to affect that variety of Tomato known to gardeners as the Trophy, and commences upon the base of fruit, near the attachment of the stalk.

Dactylium lycopersici.—Forming a dense floccose whitish pink mass. spores hyaline, with a tinge of pink, oval or ovato pyriform, uniseptate, often apiculate, produced in threes upon the terminal extremities of erect sparsely septate hyaline hyphæ.

APPLES IN COLD CLIMATES.

Orchardists living in the colder parts of Canada will be greatly interested in the following valuable article, contributed to the *Rural New Yorker* by Dr. T. H. Hoskins, of Vermont:

My orchard is on the shores of Lake Memphremagog, six miles south of the international boundary line, in latitude 45 degrees north, and is elevated 750 feet above the sea level. This territory lies fully open to the sweep of polar waves of low temperature, and there are no winters in which our thermometers do not frequently register temperatures lower than minus 30 degrees. Fifteen years ago when I began to plant an orchard, it was believed to be impossible to grow any kind of apples except the Siberian crabs in this section of Vermont and the adjoining parts of Canada. Many thousands of dollars had been expended in vain by our people for the purchase of fruit trees from southern New England and Central New York. It has been proved at a heavy cost that the standard apples of the great apple regions to the south and west of us cannot be grown here. So far as I am aware, no tree of the Baldwin, Rhode Island Greening, or Rox-