on *Pengamia glabra* Vent[1] and *Prunus bokhariences* Royl[2] causing leaf spot disease.

This is the first record of the occurrence of white bud rot disease caused by *T. roseum*.

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SPONTANEOUS TRIPLOIDY IN *SOLANUM NIGRUM* L COMPLEX

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NATURAL populations of *Solanum nigrum* have three cytotypes and these are diploids ($n = 12$), tetraploids ($n = 24$) and hexaploids ($n = 36$)[1]. There is a preponderance of evidence in support of participation of diploid and tetraploid species in origin and evolution of hexaploid *S. nigrum*[2], but there is no report in literature on natural hybridization between them. The present note reports the occurrence of triploids in natural sympatric populations of *S. villosum* Mill and *S. americanum* Mill.

Diploid and tetraploid accessions were grown sympatrically in this University botanic garden and from this, 3 sterile plants with irregular meiosis and $n = 18$ chromosomes were isolated (figure 1). At diakinesis and metaphase I, univalents, bivalents and trivalents were recorded in various frequencies. The mean chromosome association, per cell, at metaphase I, was $8.11_{I} + 7.23_{II} + 3.85_{III} + 0.47_{IV}$. Anaphase I was characterized by laggards, chromatin bridges and unequal distribution of chromosomes at poles.

It appears that the sterile triploids have originated by natural hybridization between *S. villosum* ($2n = 4x = 48$) and *S. americanum* ($2n = 2x = 24$). In general pattern of morphological characters, they closely resembled the synthetic triploids of the cross *S. villosum* × *S. americanum*. The synthetic hexaploids raised from these triploids were highly fertile and set fruit and seed abundantly. Meiosis was normal and was predominantly characterized by bivalents since here each chromosome has got its homologue.

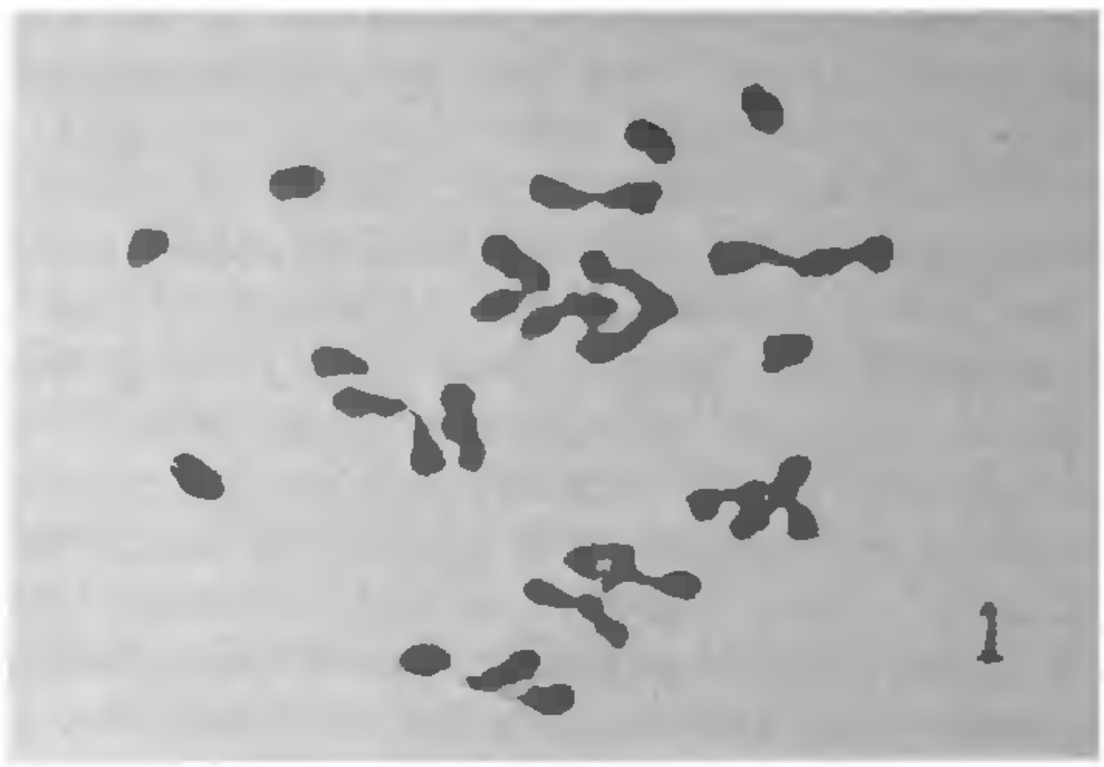

Figure 1. Meiosis in triploid plant: metaphase I showing $7_{I} + 5_{II} + 5_{III} + 1_{IV}$.

Occurrence of fertile hexaploids with regular meiosis indicates that the sterility in triploids is primarily due to chromosomal cause[3,4].

Synthetic and natural hexaploids of *S. nigrum* were identical in several morphological characters and they were readily crossable with each other producing fertile hybrids with normal meiosis.

From the aforesaid observation it is postulated that, during the evolution of polyploidy in *S. nigrum* a high degree of sympatry might have existed between its diploid and tetraploid forms resulting in hybridization and production of sterile triploids. In nature the incompatibility between the genomes in triploid hybrids most likely had induced a tendency for chromosome doubling leading to homologous pairing[5]. In the light of these it is concluded that hybridization and natural polyploidization seem to have played a significant role in origin and evolution of hexaploidy in the *Solanum nigrum* L. complex.

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