

DOUBTFUL OCCURRENCE OF *SOLANUM NIGRUM* L. IN BANGLADESH

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The presence of *Solanum nigrum* L. (Solanaceae), the black nightshade, in Bangladesh territory is recorded by all the standard existing literature of this region, viz. Clarke (1883), Prain (1903), Kanjilal *et al.* (1939), Datta and Mitra (1953), Sinclair (1955) and Khan and Rahman (2002). The species is a very common weed of waste places, fallow lands, roadsides and even crop fields. *Solanum nigrum* is also recognized as a reputed medicinal plant. In Hindu medicine, it is considered as a tonic; its leaves are used in fever, diarrhoea, eye diseases, and in chronic enlargement of spleen and are also considered a valuable alterative and diuretic (Kanjilal *et al.* 1939). The leaves are a rich source of riboflavin, nicotinic acid, citric acid, vitamin-C and betacarotene (Ghani 2003). The juice of fresh leaves is reported to produce dilation of pupil (Fox and Philip 1952 in Ghani 2003). Fifty per cent alcoholic extract of this plant at the dose of 50 mg / 100 g significantly lowered the lipid level and prevented development of fatty liver in albino rat (Agrawal and Gulati 1996 in Ghani 2003). The fruits contain saponins and alkaloids solanine, solamargine, solasonine, solasodine, steroidal genin and trigogenin (Ghani 2003). Nonetheless, before using it as a medicinal plant its correct identification is a vital prerequisite.

In Bangladesh, two distinct forms of the species occur in nature – one bears black fruits and the other bears orange fruits. The general facies of these two forms also differ. Now, the questions are: (i) do both the forms belong to the same species, *S. nigrum*? (ii) which one of these two forms actually belongs to *S. nigrum*? and (iii) do they belong to *S. nigrum* at all?

Working on the *S. nigrum* complex of the Indian subcontinent, Schilling and Anderson (1990), on the basis of chromosome number as well as some other morphological characters, recognized three distinct species, viz. (i) *S. americanum* Mill., $2n = 2x = 24$ (inflorescence umbellate, fruits shiny purple-black with reflexed sepals), (ii) *S. villosum* Mill., $2n = 4x = 48$ (fruits very distinctive orange, orange-brown or reddish-orange), and (iii) *S. nigrum* L., $2n = 6x = 72$ (inflorescence racemiform, fruits dull purple-black with sepals adhering to the fruits).

Cytological studies on the *S. nigrum* complex of Bangladesh (Sultana and Alam 2007) resulted in two distinct chromosome numbers, $2n = 2x = 24$ (of the forms with black fruits) and $2n = 4x = 48$ (of the forms with orange fruits). This finding clearly identifies the black-fruit-bearing plants of Bangladesh as *S. americanum* and orange-fruit-bearing plants as *S. villosum*, which are more common. The other species *S. nigrum*,

so far known from Bangladesh, may not at all occur here or it is a species of rare occurrence.

Different black-fruit-bearing forms, if they occur at all in Bangladesh, should be collected from throughout the country to confirm the very existence of *S. nigrum* in Bangladesh.

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