

Research Paper

Bud sport in *Bougainvillea* cultivar 'Willow White'

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Abstract

Bud sport in *Bougainvillea* cultivar 'Willow White' has been observed in a potted plant grown in the *Bougainvillea* germplasm collection of the company during the routine survey of the plants. The bud sport is detected as a periclinal chimera under the characterization programme of different cultivars of *Bougainvillea* collection of Fu Jian Sheng Hong Zhan Landscape and engineering Company Ltd. China. Attempt has been made to isolate this mutant in pure form for release as new cultivar. The bud sport has changed leaf morphology and bract colour.

Key words: Bud sport, chimera, mutation, isolation, characterization.

INTRODUCTION

A large number of cultivars of *Bougainvillea* have arisen as a somatic mutation or bud sports (Nath *et al.*, 1983, Banerji 2014). Bud sport has played very significant role in origin and evolution of many ornamental plants and *bougainvillea* is no exception (Banerji and Roy, 2017). Many of the present day *bougainvilleas* grown in nursery and gardens evolved as a bud sport (Banerji, 2017, Banerji *et al.*, 2017). Three types of bud sports have been observed in *Bougainvillea* i.e. Change of colour of the bracts, variegation in leaves and development of imperfect flower tubes (Zadoo *et al.*, 1975). Details of some important bud sports in single and double bracted *bougainvillea* has already been reported (Banerji, 2008). The sports have been observed from time to time by keen gardeners and horticulturist who have maintained them by vegetative means and have often given a qualifying name to each sport. The present paper deals with *bougainvillea* cultivar 'Willow White' and its newly evolved bud sport. Morphological characters of 'Willow White' and its bud sport.

'Willow White' is a single bracted *bougainvillea* cultivar. Plant growth is bushy. Young stem is green which turns into brown with ageing. Spine is insignificant and visible only in young stem. Spine length is 0.5cm. Spines are soft and slightly curved. Leaves are elliptic and elongated with acute tip. Leaf colour is green (Moderate olive green NN 137 A, Fan-3 Fig 2.a). Leaf size is 5.4 X 3.0 cm. Petiole length is 0.9 cm. Margin is entire. Leaf orientation is upward. Colour of the bud sport leaf is green (Greyish Olive Green

NN137 A, Fan-3 Fig 2.b) and its shape is medium ovate. Size of the bud sport leaf is 5.20 x 2.8 cm. Petiole length is 0.8cm. Bracts colour of Willow white is white (Greenish White 155C, Fan-4 Fig 3.a) and its size is 3.1 X 2.0 cm. Colour of the flower tube is white (Strong yellow green 145A, Fan-3) and its size is 2.20cm. Star colour is white and its diameter is 0.70. Bracts shape is medium ovate with obtuse tip and base in 'Willow White'. In bud sport bract colour is purple (Strong reddish purple NN 74B, Fan-2 Fig 3.b). Tube length is 2.10 cm and its colour is deep red (Light purple 85B, Fan-2). Star is white in colour and its size is 0.6cm.

MATERIALS AND METHODS

Observations on Detection of Mutation - In one potted plant of Willow White grown in germplasm collection of Fujian Sheng, Hong Zhan Landscape Engineering Company Ltd. China sported in to new bract colour and leaf shape. In the central region of the pot two branches are growing erect. The most important point observed during recording of data is the emergence of the shoot is in periclinal chimera form. At this stage chimera management is in final stage and not required going through the tedious long routes of sectorial and mericlinal chimera management steps, which are time consuming. This bud sport branch is very special, distinct and visible from a distance of 5.0 meters.

Isolation of the Mutant - Isolation of the periclinal mutant branch is in progress. In first step most the branches of Willow White plant has been pruned to provide better chance of growth to the mutant branch. Chimera management

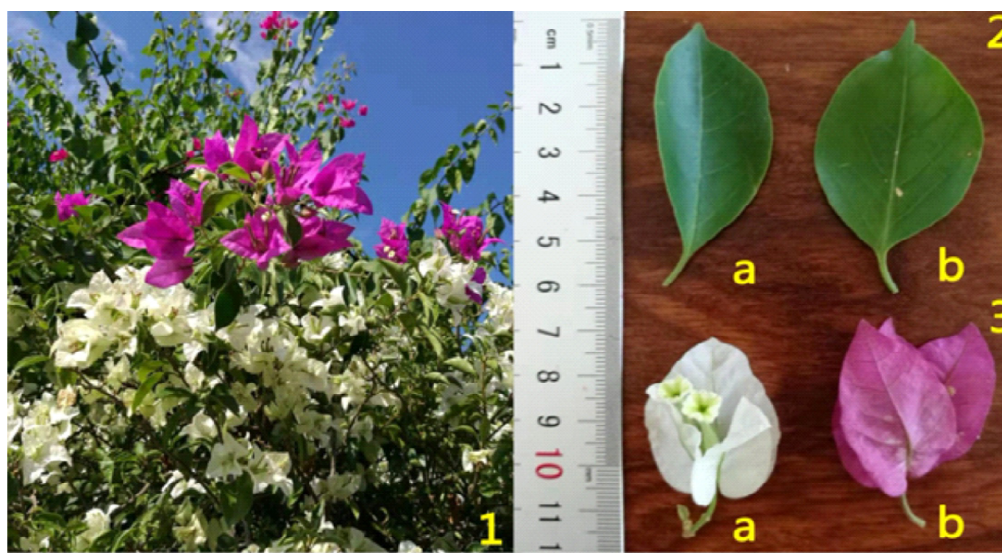


Fig. 1. Willow White Plant with Bud Sport (Periclinal branch)
 2a. Willow White Leaf b. Bud Sport Leaf
 3a. Willow White Bract b. Bud Sport Bract

technique for bougainvillea plant standardised at CSIR-NBRI, Lucknow is followed to isolate the mutant in pure form in the same method as in case of Bougainvillea cultivar Abhimanyu (Banerji, 2018).

CONCLUSION

Development of budsports and their isolation in pure form is a basic procedure for creating new varieties. This is a case study of budspore development and isolation of a new variety.

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