

POLLINATION BIOLOGY OF *Afgekia sericea* Craib.

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ABSTRACT

Afgekia sericea Craib is an endemic species of Thailand and becoming rare due to natural habitats disturbed and very low percentage in the range of 1-3% of fruit setting. The study low. It was found that inflorescences are produced from April to October and each inflorescence lasts about 2 months. SEM investigation revealed that floral structure developed acropetally. Flowers and thesis begins from 4:00 hour and last only one day. The maximum pollen viability is 90% as revealed by terazolium test, but 68% was able to germinate *in vitro* and the viability abruptly decreased after 24 hours. According to localization of esterase, the stigma receptivity occurs in the same period of time of a thesis. Nineteen insects and one bird species were found to be visitors but only twelve might take part in the pollination, of which *Megachile velutina* Smith is likely a main pollinators for *A. sericea*. These insect visitors are attracted by nectars guides on the vexillum and rewarded by pollen and/or nectar. The nectar is produced by secretary cells in the collar disc around the gynoecium. From HPLC analysis, the nectar is composed mainly of sucrose. Bagging experiments yielded no fruit setting. Furthermore, distance between individual plants may affect the success of fruit setting, i.e. the close of plants, the more fruit setting. It might be then concluded that *A. sericea* is likely cross-pollinating species and is self-incompatible. Thus. Possible causes of low fruit setting might be the existence of self-incompatibility and young fruit abortion.