

## CHAPTER 6

### CONCLUSION

1. Twenty two taxa of *Argostemma* in Thailand have been collected. Sixteen taxa are in star-shaped corolla group and six species are in bell-shaped corolla group. Among those, two species i.e. *A. argostemon* K. Sridith and *A. kurzii* C.B. Clarke are two new records to the previous list.

2. Chromosomal study in *Argostemma* Wall.

2.1 All 22 taxa of Thai *Argostemma* were diploid with the same somatic chromosome numbers  $2n = 22$ . Eighteen taxa were reported for the first time: *A. argostemon* K. Sridith, *A. condensum* Craib, *A. dispar* Craib, *A. elatostemma* Hook.f., *A. khasianum* C.B. Clark, *A. laeve* Benn. ssp. *setosum* (Geddes) K. Sridith, *A. ophirensis* Maingay ex Hook.f., *A. propinquum* Ridl., *A. rotundicalyx* K. Sridith, *A. subcrassum* King, *A. unifolioides* var. *glabra* King, *A. kurzii* C.B. Clark, *A. laxum* Geddes, *A. ebracteolatum* Geddes, *A. lobulatum* Craib var. *variabile* K. Sridith, *A. neurosepalum* Bahk.f., *A. plumbeum* Craib and *A. puffii* K. Sridith

2.2 *A. verticilatum* Wall.: its chromosome numbers are different from the previous report.

2.3 Satellites on one pair of chromosomes were found in four taxa : *A. condensum* Craib; *A. laeve* Benn. ssp. *setosum* (Geddes) K. Sridith; *A. diversifolium* Ridl. and *A. lobulatum* Craib var. *variabile* K. Sridith.

3. The chromosome data in the present work suggested that the genus *Argostemma* might remain a good taxon. And the infrageneric division of the genus might not be necessary at the moment.

4. A new technique for studying somatic chromosomes of *Argostemma* is to use corolla part of the young flowering buds of the length 1-3 mm.

## Problems and Suggestions

1. In this study, 0.1% colchicine, PDB and  $\alpha$ -Bromonaphthalene were used for pretreatment but the two latter were not succeeded. Although, somatic chromosome numbers study in *Argostemma* have been achieved by using 0.1% colchicine, but the proper pretreatment methods for chromosome number studies in *Argostemma* might be needed in order to achieve better results of metaphase chromosome complements.

2. The flowering period of *Argostemma* did not coincide with some of the collecting times therefore many more *Argostemma* species in Thailand have not been collected and studied in the present work. Moreover, the disturbances of the natural habitats of *Argostemma* spp. were the big problems in finding them according to the previous records.

3. *Argostemma* spp. are very fragile herbs, confine only to the primary forest in moist/wet habitats. It is nearly impossible to grow them in the greenhouse to get flowers or roots for chromosome study. All of the investigations in the present work had been undertaken from the fresh material collected from the natural habitats.

4. The molecular level of DNA in different populations of various *Argostemma* spp. should be proved that it is genetically, or according to this physical environment. Then further discussion on relationship of the taxa in the genus, based on those morphological differences, could be provided better understanding of the classification in the genus.