



## Research project of counterparts funded at UNJA

Name	Counterpart	Title
<b>Bambang Irawan</b>	<b>B03</b>	Flowering and fruiting ecology of ironwood ( <i>Eusideroxylon zwageri</i> Teijsm. & Binn.)

Ironwood (*Eusideroxylon zwageri* Teijsm. & Binn.; it is known colloquially in English as Bornean ironwood, bulian, billion or ulin) belongs to the family of Lauraceae. *E. zwageri* is one of the most important construction woods in Indonesia due to the excellent resistance to bacterial, fungal, insect and marine borer attack. The growth of ironwood is slow in comparison to other tree species. Knowledge of the flowering ecology of *E. zwageri* is limited although this information is very important for the management of *E. zwageri* regeneration. The study on the flowering and fruiting ecology of *E. zwageri* has been conducted to (1) investigate the relationship between climatic and edaphic factors influencing the flowering of *E. zwageri* and to (2) study the flowering and fruiting phenology of *E. zwageri*. The study has been conducted in four locations, namely (1) in the Durian Luncuk Conservation Area, (2) the Senami Forest, (3) at Bungku, and (4) in the Sridadi Village. Purposive sampling has been applied. The size of the plots was one hectare, both in Durian Luncuk and in Senami Forest. The mature trees inside the plots were observed regularly, once every two weeks. Two flowering trees growing in Bungku and Sridadi were observed regularly to obtain data on flowering and fruiting phenology. Growth rate and morphological characteristics of the shoots and the leaves were also recorded once every two weeks.

The results showed that the mean diameter at breast height (DBH) of flowering trees in the Senami Forest was 20.14 cm, while in the Durian Luncuk Conservation Area it was 39.55 cm. Additionally, the percentage of flowering trees in Durian Luncuk was slightly higher (59.79%) compared to those in the Senami Forest (51.90 %). The inflorescence reached maximum growth in eight weeks. Alternatively, fruit length and diameter reached maximum growth 18 weeks after pollination. Fruit shedding occurred at 30 weeks after pollination. Leaf length and width reached maximum growth eight weeks after initiation. There was no leaf shedding up to 30 weeks of observation.