Research project of counterparts funded at IPB

Name	Counterpart	Title
Ulfah Siregar	**B03**	Genetic diversity and evolutionary relationship of *Dyera costulata* and *Dyera lowii* in Jambi, Indonesia based on AFLP markers

The status and evolutionary relationship of two indigenous Jelutung trees, i. e. *Dyera costulata* (Miq.) Hook.f and *Dyera lowii* are less known. Meanwhile their economic value have raised concern about their conservation from overharvesting. This study aimed at clarifying the status, structure, distribution and diversity of the two Jelutung trees in their natural habitats in Jambi Province, Indonesia. Six study sites were selected, which represent gradual transformation habitats of the two tree species, i. e. from dry upland forest to peat swamp forest, as well as from relatively low disturbance to locally managed forest. Vegetation analysis were performed in 1 ha plots consisted of 20 m x 20 m square plots and line transects.

Results showed that in three dry upland forests only *D. costulata* was found, while *D. lowii* was only grown on the other three peat-swamp forests, without any overlapping population suggesting an existence of ecological barrier. In high diversity conservation forest (H ranges 3.335–3.940) both species were not dominant (IVI = 3.347–18.763) and found only in narrow stripes of a remnant population. Meanwhile in more disturbed forest area or locally managed jungle (H ranges 1.820 –3.564), the two species were becoming more dominant (IVI ranges 20.736 –127.271), presumably due to preference of local community. In their closest to nature habitat both species have uniform distribution pattern, however human intervention has changed the distribution pattern into clumping. Based on the distribution and local adaptation of the two species implication of allopatric speciation is discussed.

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