

1A: Lichen conservation: Concepts and action

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APPROPRIATE TECHNIQUES FOR THE TRANSPLANTATION OF LICHEN VEGETATIVE DIASPORES IN TROPICAL FORESTS IN THAILAND

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Isidia and soredia are good sources for the vegetative propagation of lichens because they are produced in large quantities and propagation can thus be accomplished while using the least amount of lichen material. The aim of this study was to find appropriate techniques in increasing the biomass production of lichens in the tropics. Transplantation was done through spreading *Parmotrema tinctorum* isidia and *P. praesorediosum* soredia on double-sided adhesive tape (DSAT) and thereupon fixing the lichen materials on the bark of tree trunks in different types of tropical forest at Khao Yai National Park, Thailand. The survival rate of the transplanted isidia and soredia was only 9% and 8% with those transplanted to secondary forest (SF) growing into large thalli. Alternately, transplantation using *P. sulphuratum* isidia with the same materials, but fixing the DSAT on nylon nets installed at 0°, 45° and 90° inclinations was executed in SF. The highest germination rate for isidia was as much as 50% which was found on a substrate at 45° inclination two years after transplantation. Transplantation in a shaded microhabitat using *P. sancti-angelii* soredia and *P. tinctorum* isidia to a substrate at 45° inclination was performed. After three years as much as 90% of the soredia and 70% of the isidia survived and developed into young thalli. In conclusion, appropriate techniques were achieved for transplanting lichens in the tropics utilizing the least amount of lichen material. They are essential for conservation and sustainable utilization of lichens in a changing world.