



# IX INCONTRO DOTTORANDI IN ECOLOGIA E SCIENZE AMBIENTALI

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## ABSTRACT BOOK

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# **S1 – FORESTE TERRESTRI E ACQUATICHE**

# The leaf biomass of woody species in an alluvial forest: quantitative, ecological and phenological aspects

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The aim of this work is to improve the knowledge of the ecology of a mixed broadleaf deciduous forest. The study site is the BoscoSiroNegri State Nature Reserve and is placed in the Po Plain near Pavia on the right bank of the Ticino river. The forest is an Oak-Elm wood and more precisely is included in the phytosociological association *Polygonato multiflori-Quercetum robori* Sartori 1984.

This research focuses on the evaluation of leaf mass and leaf surface and 3 methods are used to gain representative values. Two methods are focused on LAI (Leaf Area Index) with the use of both direct and indirect methods. Direct method is based on Litter-Traps and on the direct estimation of leaf surface (not with SLA). Indirect method uses the SunScan instrument which measures the differences of lighting between woodland and outside. The third method analyzes leaf demolition in the litter by means of Litter-Bag method.

The Litter-Traps have a square form with a side of 0.50 m and capture the leaf fall from the canopy. Usually every month, but every 14 days in autumn, the leaves are collected and analysed to calculate their surface.

The SunScan measures are taken every 14 day in spring and autumn and every month in the other seasons. 10 sampling points have been established.

The Litter-Bags are tissue bags in which four leaves with a known mass and surface are placed. Every month some of them are analysed to know the leaf mass and surface lost.