Excursion Map
Bos t’Ename
Excursion Bos t’ Ename Nature Reserve

(Ename, Oost-Vlaanderen)

10 September, 2008
Location of excursions

Detail Bos t' Ename
1. Short description of the area

1.1. name, municipality

Oudenaarde (Ename) (prov. Oost-Vlaanderen)

1.2. biogeographical region

Flemish Sandy Loam Ecoregion

1.3. management authority

Natuurpunt (NGO) + Flemish Agency for Nature and Forests

1.4. protection status

Natura 2000 (mesophilous, ancient forest), mostly nature zone on physical, planning map and designated in the Flemish Ecological Network, acknowledged private nature reserve (partly owned by the Flemish community); supported by LIFE-funding (2002-2007) and the Flemish Government. Natuurpunt has a technical field work team and local conservators organise working days for the volunteers team.

1.5. ecological characteristics

**soil type**
Predominantly eolic sandy loam (wet-dry) on tertiary clay and sandlayers respectively.

**ecological key processes**
local seepage/springs with iron-rich water, spontaneous woodland development and recovery, low intensity grazing

**historical information**
Bos t’ Ename has been the subject of both intensive historical and ecological research (Tack et al., 1993; Honnay et al., 1999a). Land use of the forest zone and surroundings, including detailed descriptions of management, owners, timber and ground sales at the level of individual parcels are documented since the 14th century till now. Forest grazing has already been excluded in Bos t’ Ename since the 14th century. Since then, Bos t’ Ename principally has been managed as a coppice wood with standards till ca. 1850. Due to several economical recessions and famines in the second half of the nineteenth century, Bos t’ Ename has been totally reclaimed. Since 1882 however, agricultural use came to an end and reforestation took place. Coppice wood with standards was gradually replaced by high wood during the 20th century. The coppice structure however is still visible in large parts of the forests. Tack et al.
(1993) and Honnay et al. (1999a) found that due to the reclamation pattern with very small parcels, containing wooded edges and banks, and the short period of agricultural use, most forest plants survived and colonised again when reforestation started.

**important nature values**

The forests mainly consist of Carpinion (most abundant trees: *Fagus sylvatica*, *Quercus robur* and *Populus x canadensis*) and smaller parts of Alno-Padion vegetation (most abundant trees: *Fraxinus excelsior*, *Alnus glutinosa*, *Ulmus minor*). Vast areas with species-rich ground flora, flowering in early spring, are present (most abundant are *Anemone nemorosa* and *Hyacinthoides non-scripta* in the Carpinion forest and *Primula elatior*, *A. nemorosa* and *Vinca minor* in the Alno-Padion). The study area is among the most species-rich forests in a survey of 234 randomly chosen deciduous forest patches (0.5-5216 ha) in western Belgium and the most northern part of France (Honnay et al., 1999b).

**important ecological constraints**

The most important ecological constraint is related to former land use of the area adjacent to the forest (which is now managed for conservation aims) and the actual land use in the wide surroundings. The adjacent area consists of former arable land and intensively used grasslands. Both have been heavily manured during the last decades of the 20th century. These area is, even after 5-10 years highly productive, which is a constraint for the colonisation of desired plant and animal species. The intensive land use in the wider area is responsible for high atmospheric nitrogen inputs (30-40 kg N ha⁻¹y⁻¹). It may be one of the reasons for expanding bramble and other nitrophilous understorey in the forest, mainly in the forest edge zone.

**1.6. Ecological objectives for the area**

The principal conservation goals are:

- Conservation and restoration of the species rich forest ground flora in a woodland/forest ecosystem that is dominated by native shrub and tree species.
- Restoring spontaneous, cyclic regeneration in the larger part of the forest.
- Active and intensive management in some well defined zones for specific biodiversity aims:
  - coppice wood with standards, aiming a massive vernal flowering aspect
  - coppicing or logging trees along footpaths, to preserve habitat for woodland butterflies and forest fringe plants
- Woodland expansion on former agricultural land
- Restoration of the small scaled agricultural landscape at the reserve’s edges
- Habitat restoration and conservation management for the endangered salamander *Triturus cristatus*
2. Map with management units
3. Management/restoration objectives and techniques
(see map above)

3.1. Grazing management
Since the end of the 20th century, Bos t’ Ename and Hayesbos are managed as nature reserves. In Bos t’ Ename, forest (25.1 ha) is grazed together with adjacent grassland (25.5 ha) and former arable land (10.7 ha) since 2004. A small herd of the local and hardy cattle breed “white and red of East-Flanders” (10 -14 animals, including cows, heifers, calves and one bull) and two Konik horses were introduced in the area for year-round grazing (i.e. ±0.25 animal units (AU) ha-1y-1). This rather high grazing pressure is fairly constant. Both cattle and horses were introduced to trigger and guide the development of more natural vegetation patterns on formerly intensively used grassland (summer grazing) and arable land, including forest expansion. Actual forest areas were included in the grazing block to join former agricultural land, but in particular, the managers wanted to amass knowledge concerning the effects of large herbivores on forest development (e.g. natural regeneration, bramble control, effects on ground flora). Part of the forest, adjacent to grazed parts (20.2ha) and some isolated forest patches remained ungrazed.

3.2. Coppice wood with standards
Some parts of the forest are managed to restore the massive flowering of the vernal forest ground flora. The old techniques of coppicing are applied in a cyclic system. Experiments are carried out with grazing afterwards (i.e. allowing grazing immediately or only three years after coppicing).

3.3. Transitional management mainly consists of logging popular (Populus x canadensis) plantations and natural regeneration of the forest with native species.

3.4. In one zone, active afforestation with native and indigenous species will take place.

5. Restoration of a the small scaled landscape at het reserve’s edge. This is mainly done to be on neighbourly terms with adjacent villagers, which have to get used to expanding forest in their backyard. The old and familiar landscape with small parcels surrounded with pollard willows is maintained and restored.

6. A series of small pools were made to save the relict population of Triturus cristatus

7. Public interest is large. Free walking trails are signposted, information is available in folders and information signs along the trails. From time to time, large events try to cater for a broad public.
4. References

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Literature:
Honnay O., Hermy M., Coppin P., 1999b. Effects of area, age and diversity of forest patches in Belgium on plant species richness, and implications for conservation and reforestation. Biological Conservation 87, 73-84.

Recent work on woodland regeneration in grazed areas (partly conducted in Bos t’ Ename)
5. Annex

photos of the area

Bos t’ Ename: a mosaic of forest, grassland and former arable land

Free ranging cattle in Bos t’ Ename
Woodland regeneration (mainly *Salix caprea*) in and outside grazing exclosure.

Cattle often use forest habitat for resting; in late winter-early spring they forage on bramble (*Rubus*) understorey.
Developing woodpasture landscapes with bramble (*Rubus*) and hawthorn (*Crataegus monogyna*) thickets protecting regenerating woody species (*Fraxinus excelsior, Salix caprea*)