

Introduction of water buffalo *Bubalus bubalis* to recently created wetlands at Kingfishers Bridge, Cambridgeshire, England

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SUMMARY

At a newly created wetland nature reserve in eastern England, a pair of water buffalo *Bubalus bubalis* was introduced with the aim of maintaining early successional habitats and creating a heterogeneous vegetation structure. The water buffalo grazed the required parts of the fen and reedbed, and created submerged tracks. These tracks may be used by fish to disperse into the reedbed and provide foraging areas for bitterns *Botaurus stellaris*.

BACKGROUND

Since 1995, the Kingfishers Bridge Project has transformed 61 ha of arable farmland into a mosaic of wetland wildlife habitats. Most of the site requires grazing to maintain the habitat as without it the area would quickly convert to scrub and lose much of its wildlife interest. It has been shown that grazing of water buffalo *Bubalus bubalis* can maintain the diverse and low height vegetation structure of wet meadows and kept them clear of tall emergent helophytes (Kazoglou *et al.* 2004). Trampling of vegetation by water buffalo also creates channels which can be used for dispersal by fish into reedbeds. To manage the reedbeds and achieve a variety of habitats from dense reed *Phragmites australis* to open channels, water buffalos were introduced to Kingfishers Bridge. It was hoped that channels created by the buffalo might also provide suitable bittern *Botaurus stellaris* foraging habitat.

ACTION

Introduction and grazing: In September 2006, one adult female and one adult male



Figure 2. In the reedbed tracks were made by the water buffalo. The tracks are indicated by the red arrows. The photo was taken in May 2007, the tracks date from grazing activity in the previous autumn.

water buffalo (both 2.5 years old) were introduced to 'The Fen' at Kingfishers Bridge, (Cambridgeshire, eastern England). In early September the buffalo were corralled by using temporary electric fencing into reedbed Section 5 (1.5 ha), which included the fen and the surrounding embankments (Fig. 1). Later in September, the buffalos' grazing area was



Figure 1. Grazing sites of the water buffalo at Kingfishers Bridge. In early September 2006, the buffalo grazed 'The Fen' (blue), and later in September were also able to enter reedbed Section 1 (green).

extended to include reedbed Section 1 (4 ha). In November after the first frost when there became insufficient suitable food in the reedbeds, the buffalo were moved to winter on nearby grassland. This area was also grazed by Hebridean sheep, but as water buffalo are intolerant of sheep they were enclosed in separate areas.

Health: Water buffalos are hardy and at Kingfishers Bridge can stay outside all year round. There is enough food available, hence supplementary feeding is unnecessary. Their health is checked daily by site managers.

CONSEQUENCES

Reed management: At first the water buffalo grazed the moist, lush grasses on the embankments but subsequently started browsing the reed in the fen and reedbeds, as they were expected to do. Their trampling

created submerged tracks through the reed (Fig. 2). These tracks might provide routes for fish dispersal into the reedbed and subsequently feeding habitat for bittern.

Conclusions: The two water buffalo have created a more heterogeneous structure in the reedbed, by grazing and trampling the reed. Future observations will give more insight into the long term effects of the grazing activity of the water buffalo in the reedbeds.

REFERENCES

Kazoglou Y., Koutseri I. & Malakou M. (2004) *Conservation management of wet meadows at the Greek part of Lake Mikri Prespa*. Proceedings of the BALWOIS Conference on Water Observation and Information System for Decision Support, 25-29 May 2004, Ohrid, FYROM.