

## An assessment of population status and trends of the European Kingfisher in the Donau-Auen National Park and in eastern Austria

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### Keywords

European Kingfisher, population trends, habitat characters, lateral connectivity, breeding success, population index, winter mortality, Danube floodplain

### Abstract

The European Kingfisher *Alcedo atthis* is a flagship species for natural dynamic riparian landscapes and floodplains. Fluctuations in population size, caused by strong winters, are typical for the European Kingfisher. During the breeding season of 2005 the European Kingfisher population in the Donau-Auen National Park east of Vienna was studied. Population size, breeding success and characteristics of perches used by European Kingfishers were evaluated. Morphological data and plant cover characteristics of the nest sites were collected and compared to other vertical banks without nest sites. The influence of degree of connectivity of different branches of the Danube on population distribution, breeding success and nest site characteristics were discussed.

In addition, an index for the European Kingfisher population in eastern Austria (Vienna, Lower-Austria and Burgenland) from 1988 to 2005 was calculated. The database for the index was provided by BirdLife Austria. Because winter mortality is a well known phenomenon in European Kingfishers, the index was tested by its correlation with winter intensity. For this purpose, an index for winter intensity was calculated using the total number of days and the duration of the longest period per winter with mean daily temperature below freezing point. Both indices were compared with the results from the annual European Kingfisher census of the Morava-Dyje floodplain (Verein Auring).

In comparison to a former study – 41 breeding pairs in 1989 (EICHELMANN 1990) – the results of this census (19 pairs) were relatively low. Breeding success was also very low with 34 %. In more than 75 % of cases flood waters were the reason for brood losses. Birds at breeding sites in branches of the Danube floodplain with lower connectivity to the main river had higher breeding success than those in more connected areas. Characteristics of the nest sites had no influence on breeding success.

The calculated index for the European Kingfisher population in eastern Austria correlates with the index for winter intensity. The index shows that 2005 was an average year for the European Kingfisher in eastern Austria. Both indices correlate with the results of the annual European Kingfisher census of the Morava-Dyje floodplains.

### References

EICHELMANN, U. 1990. Die Verbreitung von Steilwand-, Kies- und Röhrichtbrütern in den Donau-Auen östlich von Wien und deren Abhängigkeit von der Hochwasserdynamik, Nationalpark Donau-Auen.

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