

# Correction of dangerous overhead cables in special protection areas for birds in the Region of Murcia. 2007-2010



LIFE06NAT/E/000214

## ELECTROCUTION CASUISTIC



1. Contacto fase-fase



2. Contacto fase-tierra

Electrocution happens when bird perches on electricity pylons of distribution power lines with tension normally between 1 and 66 Kv:

by contact between two phases (contact phase-to-phase).

or, more frequently, by contact between one phase and some conductive element that can derive to earth (contact phase-to-earth).

Birds normally perch on top of crossarms (although they can do it on anyplace of the pylon). Therefore, in general, pylons with overhead elements on tension in crossarm are more dangerous; followed by pylons that have elements on tension in the same plane that perch places and finally, pylons that have elements on tension suspended under perch places. However, there is no innocuous design.

Other factors affecting probability of electrocution are:

wingspan of the bird

abundance of birds in the area

surrounding habitat

geographic location

weather

**Factors like geographic location or surrounding habitat, besides design of pylon, can determine that accidents recur in "preferred pylons".**



Osprey (*Pandion haliaetus*) perching on vault type holder pylon. Picture: Santiago Villa



Cattle egret (*Bubulcus ibis*), perching on pylon at Ricote's Valley. Picture: J.M. Escarabajal

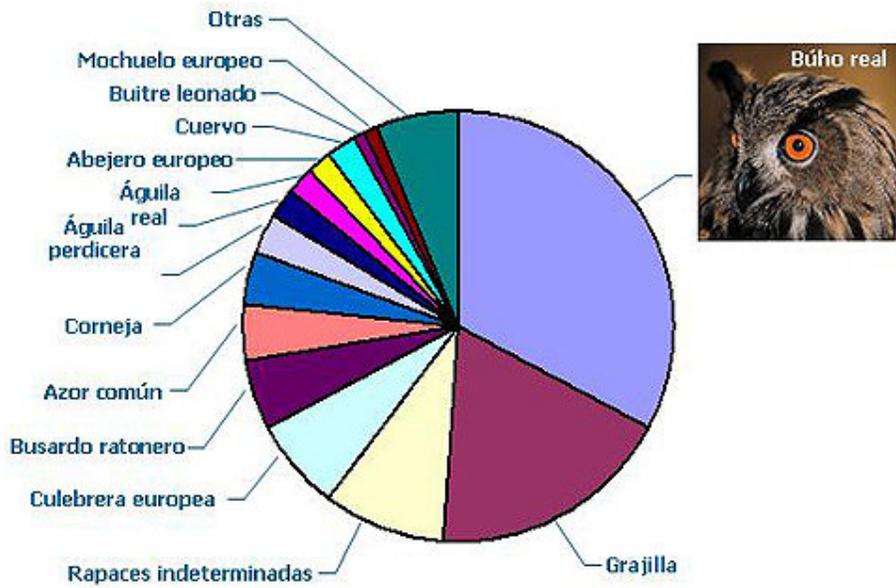
## AFFECTED SPECIES

In particular, raptors and corvids are the most affected by electrocution birds, which use pylons as perches, viewpoints, hunting places, resting places, for drying wet feathers, etc. Electrocution is one of the most important mortality causes of endangered raptors like Bonelli's eagle, Spanish imperial eagle, osprey, red kite and Canarian Egyptian vulture.

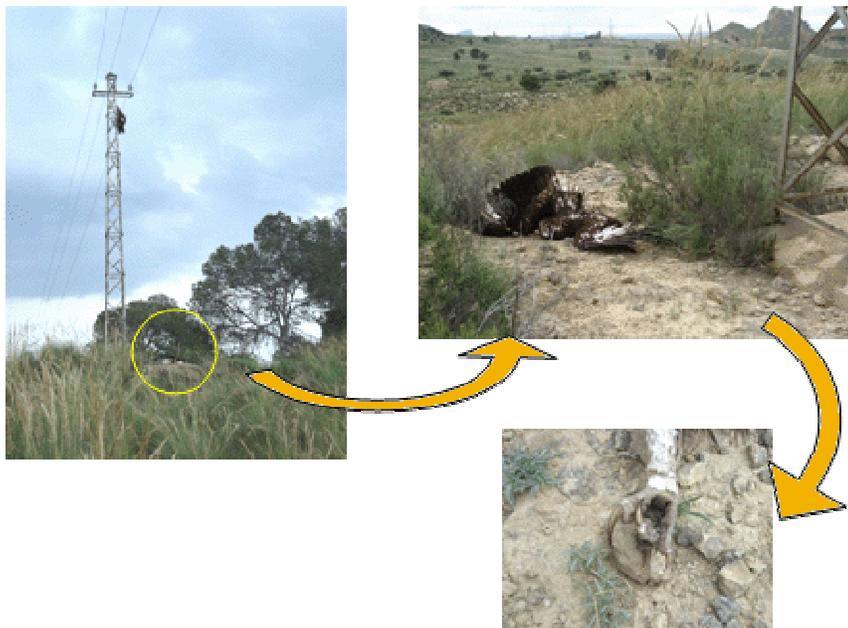


Electrocuted Bonelli's eagle on vault type pylon. This design was wrongly considered to be as little dangerous, currently, a moderate dangerousness is assigned. Picture: Domingo Rivera Dios.

In the Region of Murcia, eagle owl, jackdaw, short-toed eagle, goshawk, common buzzard and carrion crow are the species with higher number of carcass victims of electrocution. However, when relating number of carcasses to the abundance of each species in Region of Murcia, goshawk is the most affected species, followed by eagle owl, short-toed eagle, Bonelli's eagle, common buzzard and golden eagle. The incidence on some declining species in the Region is unknown since, although carcass victims of electrocution has been found, there are any census of their regional populations.



Affected by electrocution species in SPA in the Region of Murcia according to carcasses.



Others affected species in the Region are griffon vulture, common kestrel, carrion crow, little owl and honey buzzard (not breeding), as well as domestic animals, like racing pigeons.