

### Supervision :

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[frank.cezilly@u-bourgogne.fr](mailto:frank.cezilly@u-bourgogne.fr) X yes  to be discussed  no

### Title of the research project :

**Juvenile survival and recruitment in the Zenaida dove, *Zenaida aurita* : influences of early body condition and multilocus heterozygosity**

### Key words :

Birds, demography, heterozygosity-fitness correlations, first-year survival,

### Brief description :

The Zenaida dove is a tropical columbid species endemic from the Caribbean region. Since 2007, a long-term banding and monitoring program has been implemented on the island of Barbados, leading to the capture of 1595 adults and 223 chicks or juveniles. The present project aims at i) estimating two key demographic parameters, i.e. survival rate during the first year of life and recruitment (access to the breeding segment of the population) rate, and ii) testing hypotheses about the factors that may influence such parameters, using capture-recapture modelling. In particular, the student will test the influence of early body condition and multilocus heterozygosity. The student will be based in Montpellier (CEFE, CNRS) during the project. However, he or she may have to take part in the collection of data through resightings of ringed birds in the field at the beginning of the project, before analysing data (to be confirmed).

### Literature (2 references):

MONCEAU, K., WATTIER, R., DECHAUME-MONCHARMONT, F.-X. & CEZILLY, F. 2013. Heterozygosity-Fitness Correlations in Adult and Juvenile Zenaida Dove, *Zenaida aurita*. *Journal of Heredity*, 104: 47-56.

PRADEL, R., JOHNSON, A.R., NAGER, R. VIALLEFONT, A. & CEZILLY, F. (1997). Local recruitment in the Greater Flamingo : A new approach using capture-mark-recapture data. *Ecology*, 78 :1431-1445.

### Technical aspects of the research project:

Capture-recapture modelling, estimation of body condition indexes, resightings of ringed birds.

### Essential skills and abilities desired:

Good ability to work in the field in a tropical environment, good understanding of statistics, rigour,

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