(mammalian predator, avian predator, and control) during the two-week nestling stage. I used Autonomous Recording Units (ARUs) and direct observation to record the vocal and spatial responses (proximity) of the adult birds. Males responded vocally 15.7% more than females. There were consistent differences between an individual's responses for both males and females. Several vocal response variables were positively correlated between paired females and males. These results support the hypothesis that boldness may represent a component of chickadee personality, with influences on pairing. However, individuals that were tested in both years were not consistent in their response.

To consider associations with reproductive success, I examined the Carolina Chickadee mating system. Songbirds frequently engage in extra-pair copulations that result in extra-pair offspring (EPO), which need to be considered when estimating reproductive success. To assess parentage, I used 81 single nucleotide polymorphisms (SNPs). Analysis of SNP genotypes revealed that 14.2% of nestlings were EPO; 42% of broods included  $\geq$  1 EPO; and intraspecific brood parasitism (egg dumping) occurred in 10% of broods and accounted for 2% of offspring. Boldness was not associated with reproductive success or with paternity lost or gained via EPO.

This study is part of a broader investigation of behavioral syndromes in chickadees. The next steps will include testing for correlations between boldness and dominance, parental effort, and singing behavior in the same Carolina Chickadee. This work will set the stage for eventual research on the potential role of personality in hybridization between Carolina Chickadees and Black-capped Chickadees (*P. atricapillus*).

> Sarah Baillie Villanova University Biology Graduate TA

## **EBBA** Memorial Fund

Over 50 years ago EBBA established a Memorial Fund in memory of deceased members with income from the fund to be used to support student research in the field of ornithology using bird banding. The Fund consists of memorial contributions, dues from Life Memberships and other contributions members may make.

Many grants from this Fund have been made to worthwhile students through the years. Student interest in applying for an EBBA Memorial Grant has grown to record levels. The past three or four years there has been a record number of applications for which EBBA made three grants annually. We need more funding to support this worthwhile effort.

If you would like to support EBBA's quest for supporting more student research in ornithology, please consider a tax-deductible contribution or bequest to either the Memorial Fund or to next year's budget for 2014 awards by contacting EBBA's treasurer,

Don & Elaine Mease measede@enter.net