Citizen science projects involve non-professionals (e.g., community members) actively contributing to authentic scientific research (Dickinson et al., 2012). Participation in citizen science projects can benefit participants, researchers, and local communities (Dickinson & Bonney, 2012). Participants can increase knowledge, develop interest in related environmental issues, connect to the location of research, understand the scientific process better, develop ecological literacy, and engage in environmentally-conscious behavior (Jordan, Gray, Howe, Brooks, & Ehrenfeld, 2011). Conrad and Hilchey (2011) called for more case studies examining the variety of benefits associated with citizen science. To help attract and retain participants (Dickinson et al., 2012), this study sought to understand the motivations and perceived benefits of citizen scientists involved in a scientific research project examining the migration dynamics of Purple Martins (*Progne subis*; Fraser et al., 2012). Purple Martins, the largest swallow species nesting in North America, migrate to Brazil each year.

In November, 2013, semi-structured interviews (M = 12 min) with both open- and close-ended questions were conducted with 16 of the 30 citizen scientists who participated (i.e., locating, trapping, handling birds) in martin migration research in or near Camrose and Lacombe, Alberta. Respondents rated the importance of various motivations and perceived benefits (Table 1) on 5-point scales of 1 “strongly disagree” to 5 “strongly agree,” and the Wilcoxon signed-rank test was used for testing differences between these motivations and perceived benefits. Respondents also answered closed-ended questions about the impacts of their participation on awareness and engagement and answered open-ended questions about examples of those impacts. All answers were recorded verbatim and transcribed for analysis.

Respondent mean age was 48 years and 12 of the 16 respondents (75%) held a bachelor’s degree or higher. No respondents had received specialized training for the project; eight of the 16

respondents (50%) had been involved in the project for one year and the other eight respondents (50%) for two years. Most of the initial motivations closely matched the perceived benefits of participation (Table 1). Similar to Bruyere and Rappe (2007), helping a species in need and learning about martins were rated highest, whereas spending time with family and friends was rated lowest. Meeting like-minded people was the only variable that saw a significant, though small, increase between motivations and perceived benefits. In other contexts, the motivations and perceived benefits of citizen scientists typically relate to helping the environment, social belonging, and learning (Bramston, Pretty, & Zammitt, 2011). Although Jordan et al. (2011) found less support for learning about science, respondents in the present study rated this item more important; this difference may due to researchers providing results and potential uses of past purple martin migration studies to participating citizen scientists. Thirteen respondents (81%) said the experience either matched or exceeded their expectations and the remaining three respondents had no expectations (19%).

Table 1 about here

With respect to awareness and engagement, six participants (38%) became aware of local environmental issues (e.g., proper care of martin houses, use of pesticides), and 13 (81%) became aware of provincial to international issues (e.g., climate change, deforestation, other threats related to martin migration) as a result of engaging in this project. Seven participants (44%) became involved in other stewardship projects (e.g., putting up bird nest boxes, volunteering at a bird observatory, engaging in provincial wolf issues) after participating in this project. Eight participants (50%) increased their environmentally-friendly behaviours (e.g., feeding birds, reducing greenhouse gas emissions, walking instead of driving) as a result of engaging in this project. Finally, all participants wanted to continue involvement in the project.

Other studies have shown important increases in scientific literacy (Cronje, Rohlinger, Crall, & Neweman, 2011), awareness, and environmentally-friendly behavior (Jordan et al., 2011) as a result of participating in citizen science projects.

These results suggest that researchers employing citizen science may be able to attract participants by emphasizing altruistic motivations of helping wildlife and learning about specific species. Although less important, social interactions may also be valuable to recruit and retain participants (Dickinson et al., 2012). Providing data for research projects is important, but impacts from citizen science to participants in terms of scientific literacy, skill development, and conservation support are also valuable (Jordan et al., 2011).

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