

50 YEARS DOWN THE WINDWARD ROAD: REFLECTIONS ON SEA TURTLE POPULATIONS AT TORTUGUERO, COSTA RICA*

Emma Harrison¹ and David Godfrey²

¹ Caribbean Conservation Corporation, San Jose, Costa Rica

² Caribbean Conservation Corporation, Gainesville, Florida, USA

In 2009 the Caribbean Conservation Corporation will celebrate 50 years of sea turtle research and conservation at Tortuguero, which began with the arrival of Dr. Archie Carr at a small, isolated village on Costa Rica's Caribbean coast. Since then the work conducted by CCC at Tortuguero has provided the foundation for much of the current knowledge of sea turtle biology and nesting ecology and has served as an example of a classic conservation success story. Tortuguero hosts the largest nesting population of green turtles (*Chelonia mydas*) in the Western Hemisphere, and globally remains one of the most important nesting sites for this species. In addition, leatherback turtles (*Dermochelys coriacea*) nesting at Tortuguero form part of the fourth largest nesting population of this species in the world, and the beach also supports a small but important population of hawksbill turtles (*Eretmochelys imbricata*). This paper will discuss investigation methods and monitoring protocols, with an examination of their development over the last half-century, and will include results from important historical studies initiated at Tortuguero. From its humble beginnings to modern scientific advances, the research program at Tortuguero is one of the longest running research programs in the world for any species. Findings will be presented from the long-term tagging program, which includes over 50,000 individuals, and continues today. These tag return data provided the first irrefutable proof that green turtles were migrating throughout the Caribbean but returning to Tortuguero to nest; subsequent technological advances have revealed the details of these extensive migrations. Population trends observed over the last three decades will be examined, with specific reference to the documented increase of over 400% in green turtle nesting since conservation measures were established. The population status of the three marine turtle species nesting at Tortuguero will be discussed with respect to past, present and future threats. Over the years Tortuguero has served as the testing ground for research methodology that has been incorporated into turtle conservation and monitoring projects around the globe. It has also been a classroom for generations of turtle biologists and conservation managers. The past 50 years have been fraught with difficulties, but there have been many significant accomplishments. While the present is not perfect, and the future promises a new array of challenges, the valuable lessons learned provide hope for the continued survival of sea turtles at Tortuguero.