

# A New App Aids African Turtle Researchers

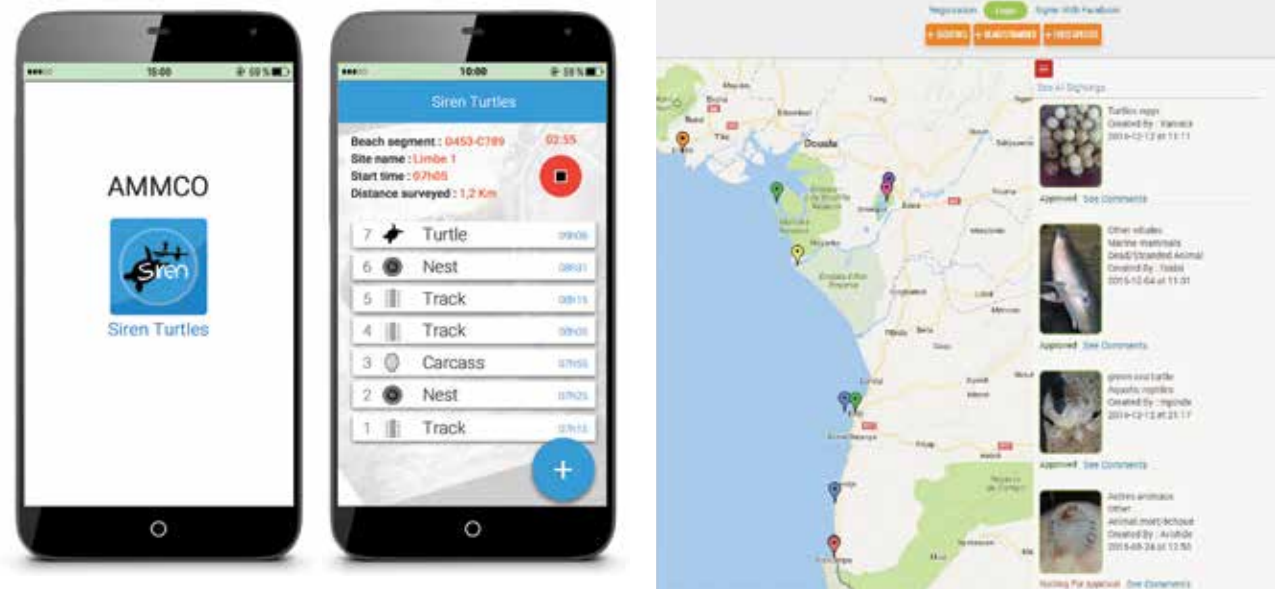
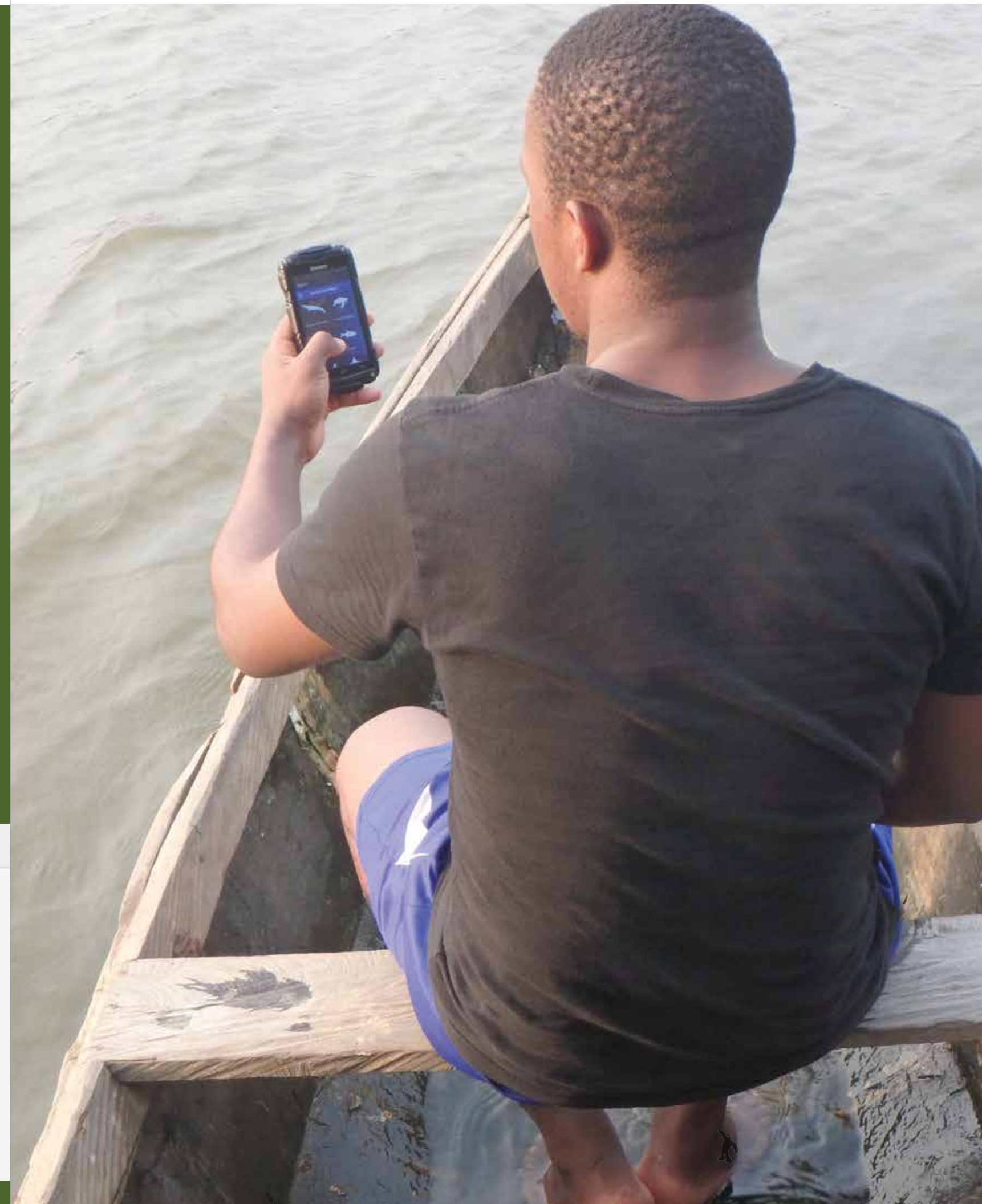
By ARISTIDE TAKOUKAM KAMLA

Marine megafauna, such as sea turtles and manatees, provide valuable ecosystem services, and the absence of those creatures in an ecological community can lead to severe imbalance. Up-to-the-minute data on megafauna presence and abundance are often hard to acquire, especially in places such as rural Africa, where obtaining data can be complex, expensive, and hampered by the absence of trained scientists. When the animals being studied also face hunting pressure as a result of poverty, weak legislation, or poor enforcement, the job of data collection can be even more challenging. The absence of accurate, up-to-date data can make conservation of these important creatures and their habitats very difficult.

To confront that challenge, in 2015 the African Marine Mammal Conservation Organization (AMMCO)—a Cameroon-based nongovernmental organization—created the first mobile phone application, SIREN, dedicated specifically to marine megafauna data collection in West Africa. SIREN is available on the Android phone platform in English and French. It provides a user-friendly, inexpensive way to acquire opportunistic data on marine megafauna in West Africa that can be used to guide conservation efforts. AMMCO staff members and partners piloted the application by providing smartphones with the SIREN app installed to 10 fishers from coastal Cameroon. The app enabled the participants to collect and record data (date, time, GPS location, species, identification photo, and more) on large marine animals whenever such animals were spotted. More than 100 sightings were recorded during the pilot study, and the corresponding data were shared with the SIREN database. AMMCO

will make final adjustments to the app and has plans to promote and scale up the use of SIREN in West Africa and elsewhere in 2017.

In collaboration with Rastoma, the West African Sea Turtle Network, AMMCO is also developing a new version of the SIREN app, called SIREN-Turtles, to be used exclusively for sea turtle nest-monitoring research. Its purpose is to advance simple and systematic collecting and sharing of monitoring data about nesting beaches on a broad scale in Africa and beyond. SIREN-Turtles is being designed for use both online and offline and will be available in iOS, in Android, and through a web interface. The app will be produced in French and English, and other languages will be added in the future. SIREN-Turtles will facilitate temporal and spatial data gathering and will ensure secure data storage, quick processing, easy sharing, and enhanced comparability of data among multiple projects. Because data collected through SIREN-Turtles will match SWOT Minimum Data Standards for Nesting Beach Monitoring (see *SWOT Report*, vol. VI, p. 47), it will readily interface with SWOT's global database and with other local-, national-, or regional-scale databases. SIREN-Turtles will allow users to manage data online and to easily generate and export statistics and graphs. The app accepts data on live or dead turtles, nest data, and other biological parameters, as well as information on threats and conservation issues. SIREN-Turtles will open a whole new world for sea turtle researchers, thus enabling them to easily gather and use data to support decision making and to improve the protection of sea turtles locally, nationally, and globally. ■



THIS PAGE: Screenshots from the SIREN-Turtles mobile phone application, which is designed to facilitate sea turtle nesting data collection, and the online map interface displaying reported observation data. © AMMCO; AT RIGHT: A SIREN app user reports an observation in Lake Ossa, Cameroon. © AMMCO