

Gharial Field Techniques: GPS Radios & Game Cameras

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Innovative advances in GPS telemetry and game camera surveillance have been utilized in the Gharial Ecology Project, underway since 2008 in the lower Chambal River, north India. These field techniques have been employed recently to provide detailed information about movements and behaviors of gharial, but are applicable to other study populations, as well as other crocodilian species.

GPS logging radios, incorporating a VHF tracking signal and UHF remote download capability, are providing fine scale daily movement and activity records for individually tagged, resident wild gharial. To date, units have been operating for 16+ months, have provided hundreds to thousands of daily locations per animal, and provide a way to verify the accuracy and limitations of conventional manual tracking. Details of radio attachment procedures as well as tracking methodologies are illustrated, and the routines for programming location/fix schedules and remote downloading at periodic intervals are explained.

For detailed observations of hatching and post-hatching behaviors of adults and young at communal nest sites, game cameras have been customized with long-lasting battery packs to allow continuous video/still image coverage for 24-36 hours per deployment. In addition, conventional game cameras have been modified to provide viewing ports to permit accurate framing and viewing of the field of view for image capture. Details of the necessary modifications to off-the-shelf models are provided, and step-by-step instructions are included in this poster presentation, accompanied by video examples.