Biomark biologists and engineers have worked closely with partners in the sea turtle community to develop improved research tools for the unique identification of sea turtles. Based on partner feedback, our new products feature reduced plastic waste, the addition of luer-lock attachments for needle retention, and the addition of field friendly features such as backlighting and waterproofing.
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Biomark PIT Tags are the highest performing fish and wildlife RFID tags on the market. The APT12™ high performance PIT tags are encapsulated in biocompatible glass and easily applied using Biomark implanters. Because of the internal application, PIT tags have a high retention rate and can provide life-long data critical for the conservation and management of long-lived, slow to mature, endangered species.

Biomark PIT tags are ISO 11784/11785 compliant and ICAR approved, guaranteeing 100% unique identification. PIT tags come in a range of sizes, applicators, and quantities to suit your specific study design.
The **MK25 Luer-Lock Implanter** allows the user to quickly and safely load a needle into a long lasting, ergonomically designed tag applicator. This was designed specifically for the sea turtle community to ensure needle retention by employing luer-lock technology in a reusable implanter to reduce plastic waste.

The MK25LL™ is designed to be used with our high performance APT12™ PLS sterile needle, preloaded with an APT12™ 12mm PIT tag.
MK25LL implanter with individually packaged, sterile needle preloaded with APT12 PLS™

Flexible attachment for right and left-handed taggers!
SYRINGE STYLE
IMPLANTERS: MK10 & MK15

The **MK10 & MK15 Syringe Style Implanters** are designed with corrosion resistant, stainless steel spring and hardware for multiple uses. The MK10 implanter fits the N125™ 12-gauge luer-lock needle and can be loaded with an APT12™ or GPT12™ PIT tag. This tagging option is designed to reduce plastic waste and decrease cost by leveraging field sterilization for applicator reuse. The MK15 syringe implanter is designed to be utilized with individually packaged, sterile, GPT12™ pre-loaded needles.
The **HPR Lite** reads all frequencies of PIT tags, including encrypted tags from other manufacturers. The rugged, waterproof housing was designed specifically for field applications in harsh elements and has been upgraded with a backlit display, ideal for nighttime surveys. The HPR Lite is the ultimate reader for whatever field conditions you may encounter.
The **GPR Plus** is a compact reader, able to read all PIT tag frequencies, including encrypted tags from other manufacturers. The GPR Plus comes with an Aquapack waterproof case. The GPR Plus is our most affordable hand reader.
The Android and Windows based, electronic **Data Collection Module (DCM)** was developed by Biomark researchers and engineers to increase the efficiency and accuracy of data collection. DCM allows users to build customized data collection templates that incorporate all necessary metadata, meristics, and morphometrics.

As an added bonus, DCM Bluetooth connects to peripheral devices such as Biomark PIT tag readers, electronic measuring boards, scales, label printers, and 2D barcode scanners to help automate data collection. Gone are the days of transcription error, forgotten fields, and mystery vials!
<table>
<thead>
<tr>
<th>Order</th>
<th>Field Title</th>
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<td>Tag ID</td>
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<td>HEX Tag ID</td>
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<td>Alternate ID</td>
<td>Text</td>
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<td>Multiple Choice</td>
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<td>4</td>
<td>Straight Carapace Length</td>
<td>Numeric</td>
<td>Min 0, Max 1000</td>
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<td>5</td>
<td>Life Stage</td>
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<td>Flipper Tag</td>
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<td>Injury</td>
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<td>8</td>
<td>GPS Location</td>
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<td>Latitude, Longitude</td>
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Unique individual identification is a critical component of long-term sea turtle tagging and monitoring. Unique ID can be used to evaluate individual movement and growth patterns through re-sightings, estimate population size using mark-recapture modeling, and monitor remigration intervals of nesting females, to name a few.

In collaboration with Loggerhead Marinelife Center, we have built a platform customized to the needs of the marine turtle community. This includes identifying which data are most critical and how best to standardize them, developing data management and privacy policies, and integrating data from a variety of sources.

Register and start collaborating today at www.seaturtledb.com.
Powering wildlife research, conservation, and management for 30 years