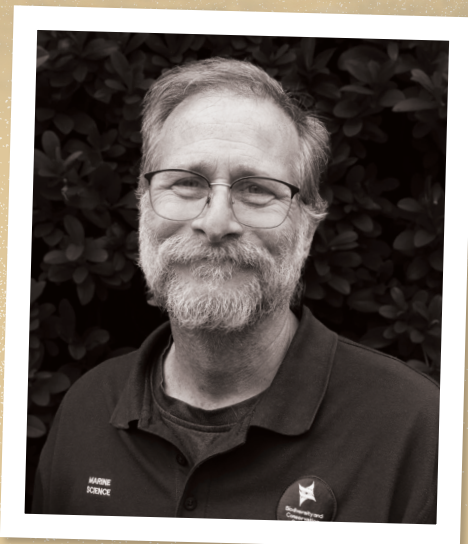


Touched by nature

SO MANY TURTLES, SO LITTLE TIME



In memory of Dr Anton D Tucker 1957–2025

Dr Tony Tucker came from a generation of scientists that pioneered conservation research. Over time, his dedicated and thorough brand of science made him a leader and a mentor amongst his fellow scientists. Tony's discoveries and contributions about freshwater crocodiles, freshwater turtles and marine turtles are globally recognised, and have driven positive conservation outcomes for freshwater and marine reptiles across the world.

by Clodagh Guildea

On a summer day in 1957, Anton (Tony) Tucker was born in leafy Washington County, Georgia USA. An adventurous, inquisitive and intelligent child and a naturalist by nature, Tony would explore the woods near his home looking for box turtles and established his first 'capture-mark-recapture' study using his mother's nail polish before the age of 10. This sparked the beginning of what would be Tony's life-long passion—researching and monitoring freshwater and marine reptiles all around the world.

Tony came from a generation of scientists that pioneered conservation research, where many of the world's largest long-term population datasets originated. His dedicated and thorough brand of science was crafted by experiences working with renowned ecologists.

AUSTRALIA-BOUND

In 1991, Tony and his partner Nancy FitzSimmons, a conservation geneticist, travelled to Australia where they worked alongside Dr Colin Limpus tracking loggerhead turtles (*Caretta caretta*) using VHF technology at Mon Repos turtle rookery in Queensland—a revolutionary tracking technology at the time—before Tony and Nancy both began their PhDs.

Tony worked as a freshwater turtle biologist for two years after completing his PhD, which would influence future decisions about water management in south-east Queensland.



From 1999 onwards, Tony and Nancy have spent several weeks each year paddling out in a canoe and snorkelling through creeks in remote areas of the Kimberley, conducting capture-mark-release studies of freshwater turtles that were previously understudied.

This mostly self-funded research resulted in a dataset that significantly contributed to conservation management in the region and is a legacy of Tony's

dedication to freshwater turtle research. So great is Tony's legacy, that a newly discovered species was named after him in 2009—the *Camallanus tuckeri*—an intestinal parasite of side-necked turtle species in the Kimberley!

SHARING KNOWLEDGE

In 2013, Tony began his role as Senior Research Scientist with the North West Shelf Flatback Turtle Conservation Program at the then Department of Parks and Wildlife. The flatback turtle (*Natator depressus*) was an exciting species for him to work on, given how little was known about their biology, behaviour and populations.

Tony's background in stable isotope analysis was vital to the team, enabling them to understand flatback turtle diets without having to catch feeding flatbacks in the wild—a feat accomplished a few years later in Yawuru Nagulagun Roebuck Bay Marine Park with Tony at the helm.

Throughout his career at the Department of Biodiversity, Conservation



.....
Previous page

Main Flatback turtle on Eighty Mile Beach.

Photo – Heather Bewsick

Inset Dr Tony Tucker, Kensington 2023

Photo – Clodagh Guildea/DBCA

Top Applying satellite trackers to loggerhead turtles.

Photo – DBCA

Above left and right Tony collecting turtle genetic samples and bones in Camden Sound, 2014 (left) and Cassini Island, 2015 (right).

Photo – Blair Bentley

Inset left Weighing turtles on the shore.

Photo – DBCA





Listen to scientists talk about turtles

Scan this QR code to listen to the episode or search for 'Western Australia by nature' wherever you get your podcasts.



and Attractions and its predecessor agencies, Tony played an integral role in discovering the distribution and density of flatback turtle nesting sites across the Kimberley through the Western Australian Marine Science Institute (WAMSI) Kimberley Turtle Project, which involved many weeks camping at remote beaches 'ground truthing' aerial surveys with Traditional Owners.

At Eco Beach and Eighty Mile Beach, Tony regularly trained and worked with Aboriginal rangers during the nesting seasons, carrying out tagging and satellite tracking programs. Tony loved exchanging knowledge with Aboriginal rangers and delighted in learning more about Aboriginal culture and history wherever he travelled.

A LASTING LEGACY

Throughout his career, Dr Tony Tucker became renowned in his own right, publishing more than 150 peer-reviewed scientific papers and book chapters about freshwater crocodiles, freshwater turtles and marine turtles.

His expertise spanned many ground-breaking concepts, where he collaborated on projects including methods to age long-lived reptiles through skeletochronology (bone growth rings) and the calculation of epigenetic clocks, revolutionary VHF radio and satellite tracking techniques, applications of stable isotope analysis, and determining population genetics and dynamics of several species.

Tony was an invaluable mentor to the next generation of researchers, an expert reviewer for more than 50 scientific journals, and a dedicated member of many professional groups including the International Union of Conservation of Nature (IUCN) Sea Turtle Specialist Group and International Sea Turtle Society.

Tony's discoveries and contributions are globally recognised and have driven positive conservation outcomes for marine and freshwater reptiles across the world. Tony would famously say "so many turtles, so little time", but he didn't waste a minute.



Top left Tony applying a satellite tracking device to a flatback turtle with Karajarri and Nyagumarta Warrarn IPA Rangers at Eighty Mile Beach 2015.

Photo – Erina Young

Top right Tony Tucker with a foraging flatback turtle caught in Yawuru Nagulagun Roebuck Bay Marine Park, 2019.

Photo – Jenna Hounslow

Above left Flatback turtle hatchling on Barrow Island.

Photo – C Rings

Inset above Tony presenting his skeletochronology research.

Photo – Tristan Simpson

DR TONY TUCKER

1976–1990 USA

Lifeguard at Jekyll Island in Georgia, where he became interested in nesting loggerhead turtles on the beaches.

Volunteer in a turtle monitoring program, Little Cumberland Island.

Undergraduate degree in Biology, Georgia Southern University.

Monitoring feral animals in Haiti.

Masters degree in Zoology, University of Georgia, where he studied leatherback turtles at Culebra in Puerto Rico, and worked on a leatherback project in French Guinea.

Herpetology research assistant at Savannah River Ecology Laboratory studying diamondback terrapin freshwater turtles.

1991–2001 Australia

Tracking loggerhead turtles, Queensland Department of Environment and Heritage.

Doctor of Philosophy (PhD) in Zoology, University of Queensland, studying freshwater crocodiles in North Queensland.

Senior Conservation Officer studying freshwater turtles, Queensland Department of Environment and Heritage. This work has since influenced weir development and freshwater management.

Earthwatch program founder with his partner Nancy on Australian freshwater turtles.

Statistician and part-time lecturer, University of Canberra.

2002–2003 Western Pacific Ocean

US Geological Survey, Guam. Studying the impacts and management of the invasive brown tree snake.

2004–2013 USA

Senior Scientist at Mote Marine Laboratory and Aquarium, Florida. He worked on several species of marine turtles and initiated many important long-term projects that continue today.

2013–2025 Australia

Senior Research Scientist for the North West Shelf Flatback Turtle Conservation Program, Department of Biodiversity, Conservation and Attractions. He worked across the state with industry, university, government and Indigenous partners to research flatback turtle populations, biology and behaviour.



Mentors and mates

Tony worked with Dr Jim Richardson monitoring loggerhead turtles on Little Cumberland Island in Georgia as a young adult in the 1970s. As a postgraduate master's student, he was supervised by Dr Whit Gibbons, conducting research on leatherback turtles and diamondback terrapins at the Savannah River Ecology Laboratory. In Australia, fellow crocodile-wrangler and turtle enthusiast Dr Colin Limpus co-supervised Tony's PhD with Hamish McCallum at the University of Queensland, becoming a lifelong mentor and friend. Tony's expertise was valued by Steve Irwin, with whom he collaborated at Australia Zoo in the 1990s.

Above Colin Limpus (left), Tony Tucker (centre), Mark Read (right) weighing a freshwater crocodile after being captured in the Lynd River as part of Tony's PhD research in Northern Queensland, 1993.
Photo – Keith Springfield

Left from top

1) Tony Tucker during a diamondback terrapin survey in Kiawah Island.

2) Tony Tucker (centre) during a diamondback terrapin survey in Kiawah Island, circa 1989.

Photo – David M. Barron/Oxygen Group Photography

3) Tracking loggerhead turtles using VHF technology in Queensland, 1992.

4) Tony holding a freshwater crocodile with Colin Limpus and research assistants, 1993.

Photos – Colin Limpus

5) Tony Tucker with a Kemp's ridley turtle while working at the Mote Marine Laboratory and Aquarium.

6) Tony Tucker with a juvenile flatback turtle, 2015.

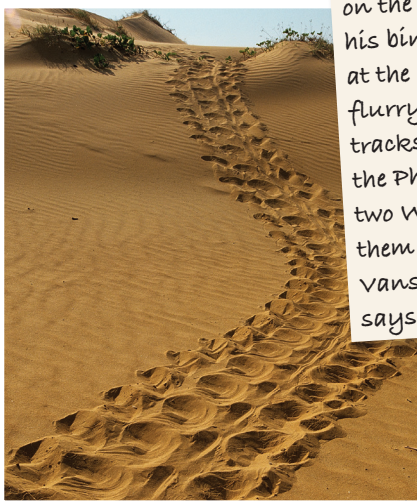
Photo – Corrine Severin/DBCA



TALES FROM THE FIELD



The sea plane flies through the bright blue Kimberley sky, large fluffy clouds forming on the horizon. In the cockpit, Tony holds his binoculars to his eyes and squints down at the orange beach passing below. He feels a flurry of excitement as he spies several turtle tracks visible in the sand. He turns to Blair, the PhD student he is supervising, and the two Wunambal Gaambera rangers assisting them on this ground truthing expedition in Vansittart Bay. With a glint in his eye, he says "we've got turtles."



Feeling the night air, hot and humid against his skin, Tony holds his torch higher, scanning the surface of the water for the glow of eyes watching from below. Although clear, the constant sound and movement of the river keep Tony's adrenaline racing as he wades through waist-deep water, on high alert and ready to jump on the next freshwater crocodile with Dr Colin Limpus and his team of keen undergraduate students.

The weight of the small swiss army knife is felt in his pocket as Tony walks through the dunes. He knows there is the body of a deceased flatback turtle somewhere around here. He smells it before he sees it, the shell and bones partially covered in sand underneath a scraggly bush. Carefully, he draws his knife and scrapes some of the skin from the exposed flipper, collecting the sample for genetic analysis. He digs in the sand and extracts the humerus bone, putting it in a plastic zip-lock bag. "Another bone for your growing collection, Tony?" laughs Scott when Tony is finished, knowing he would never miss an opportunity to collect more bones for his turtle ageing skeletochronology research. Tony smirks back and gives Scott a quick nod.

Turning his head to survey the landscape, all he sees are red cliffs, golden sand and turquoise water. The sounds of waves lapping, seabirds screeching and brush rustling fill his ears. The sides of his mouth rise in a small smile, barely visible underneath his beard. This is where he loves to be, doing what he loves to do—remote fieldwork in the rugged Kimberley, making new discoveries about marine turtles. For Tony Tucker, this is what it means to live.

Main Tony Tucker standing on a beach in the remote Kimberley after disembarking a float plane, 2015.

Inset top Tony counting flatback turtle eggs, 2015.

Photos – Blair Bentley

Inset above Flatback turtle tracks.

Photo – Jiri Lochman

Below Loggerhead turtle.

Photo – DBCA



Clodagh Guilden is a Science Communication and Education Officer for DBCA's North West Shelf Flatback Turtle Conservation Program. She can be contacted at clodagh.guilden@dbca.wa.gov.au or (08) 9219 9757.

The author would like to acknowledge the generous contributions and shared memories of Nancy FitzSimmons, Scott Whiting, Sabrina Fossette, Blair Bentley, Mat Vanderklift, Colin Limpus, Mark Hamann, Jenna Hounslow, Erina Young, Tristan Simpson, Natasha Samuelraj and James Gee. Thank you for sharing your photographs and heartfelt, funny and honest stories of Tony.