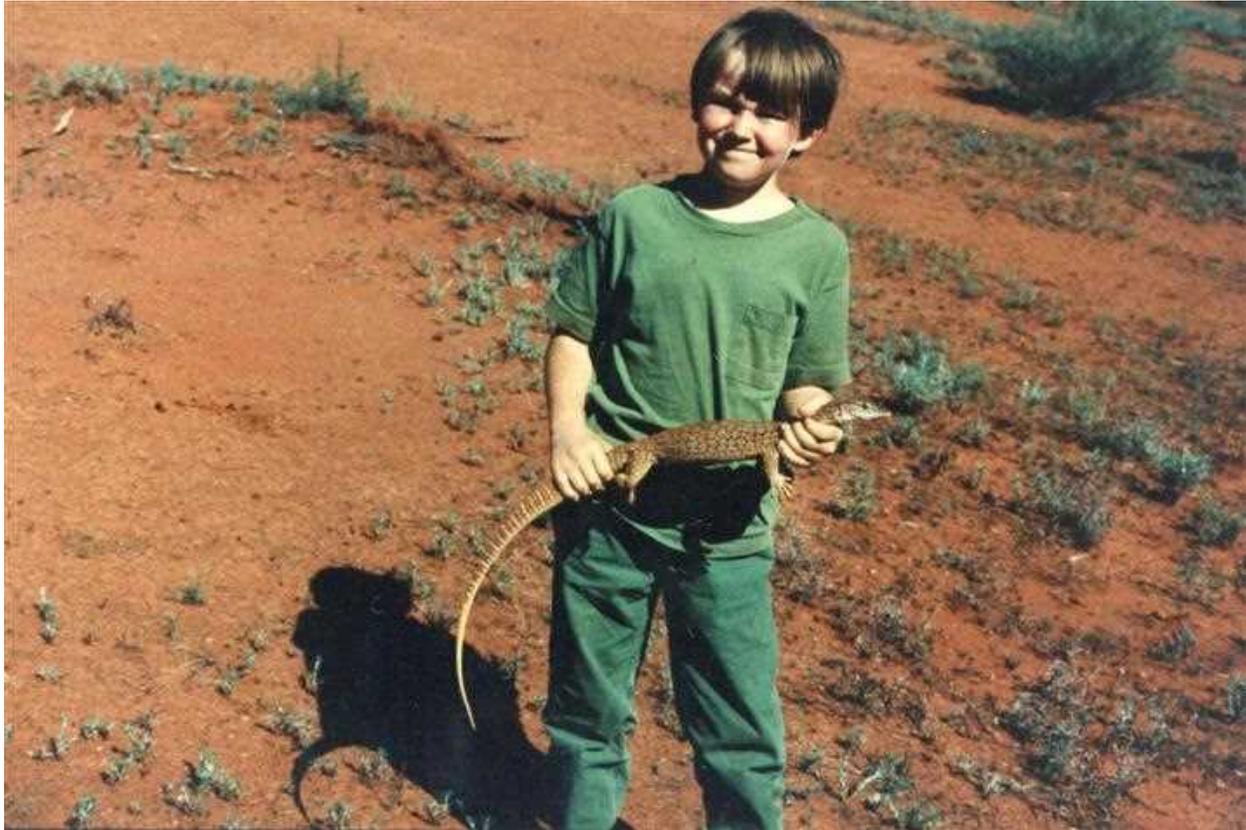


# **Australia Herp Adventures**



**Robert L. Bezy**

**Dedication:  
To the memory of  
Kit Bolles Bezy  
who shared our  
Australian adventures**



**Cover:  
*Moloch horridus*  
(Thorny Devil)  
modified from a photo by  
Wade C. Sherbrooke**

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## Australia Herp Adventures

**Robert L. Bezy**

**Abstract.** This work of biofiction follows the adventures of two young friends searching for amphibians and reptiles in the deserts of western Australia. They become interested in identifying the factors that have led to the extraordinarily species-richness of the herpetofauna of this region. They also ponder why the various deserts in Australia do not differ conspicuously in vegetation whereas the North American deserts do. This book has its roots in my 1993-1994 trip to Australia. I have attempted to accurately portray the herpetofauna, but the people and events described are fictional.

### **Introduction.**

Readers may wonder why I write these stories. They have two roots. First they reflect the very close relationship I had with my brother Billy when we were young.

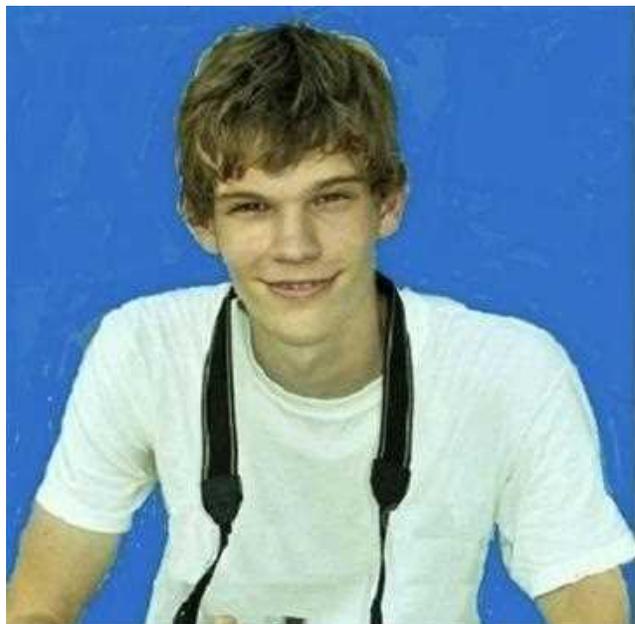
With our goat Mikey, Billy and I romped the back yards, irrigation ditches, and canal banks, barefoot and shirtless in the scorching Phoenix sun. The inside belonged to the boring adults who did not have a life, but we ruled supreme in the wonderful out-of-doors and I was in love with wildness and Billy.

We never argued or mistreated each other and Billy always seemed to genuinely like being with me. We bathed together and talked and laughed in bed far into the night. When he finally fell off to sleep, I had no reason to be awake and followed him into the sweet dreams of our life together.

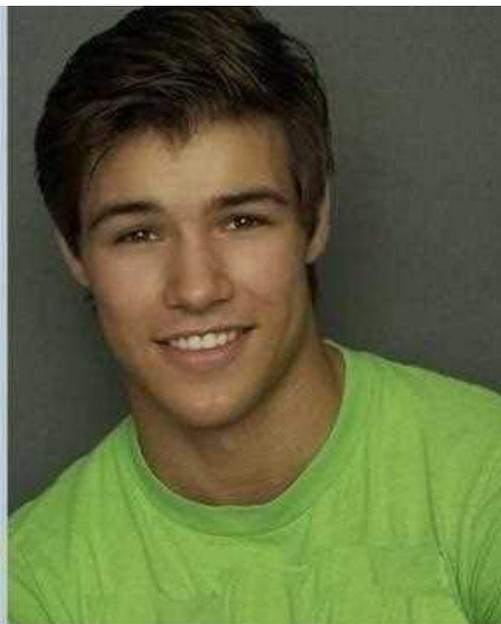
We were much more than best buds or ordinary brothers, but inseparable bros who loved each other deeply. Look at how we hold our arms and hands in exactly the same way.

The second origin of these stories is my love of adventures looking for amphibians and reptiles in the wild places. The Woodhouse's Toads, Western Groundsnakes, and Checked Gartersnakes in our Phoenix neighborhood were also my brothers. This led to the sojourns into the earth's wild places, from the deserts to the tropics, searching for amphibians and reptiles. These adventures were, and still are, the centerpiece of my life.

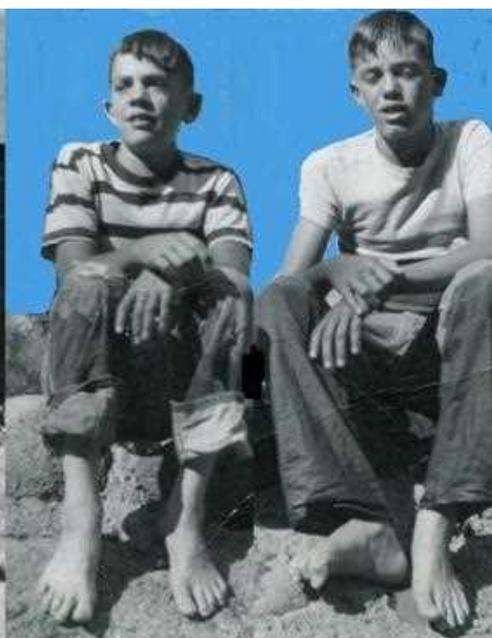
Leaving the comforts of home and risking life and limb to explore the unknown wilds is the essence of life. The thrill of searching for herps and the answers to my questions is still with me. Although at 81 COPD keeps me from doing that physically, I continue to have herp adventures by writing and exploring places no human has gone before.



**Bobby**



**Billy**



**Bobby and Billy**



**Bobby and Billy**



**Bobby and Billy**



*Thamnophis marcianus* by Matthijs Hollanders.

## 1. Australia bound.

"Billy, I think we should return to Australia. We had a lot of fun exploring the Simpson Desert east of the red center. For comparison let's go to the western deserts and examine their transitions from thornscrub."

"You know how much I love Oz and going on adventures with you, Bobby. What are you thinking for transportation?"

"I have been pondering that question. I think that instead of renting a vehicle, it would be simplest for us to just buy a Toyota Land Cruiser in Darwin and sell it in Perth. That way there are no time strings attached to our adventures and we can enjoy them for as long as we want."

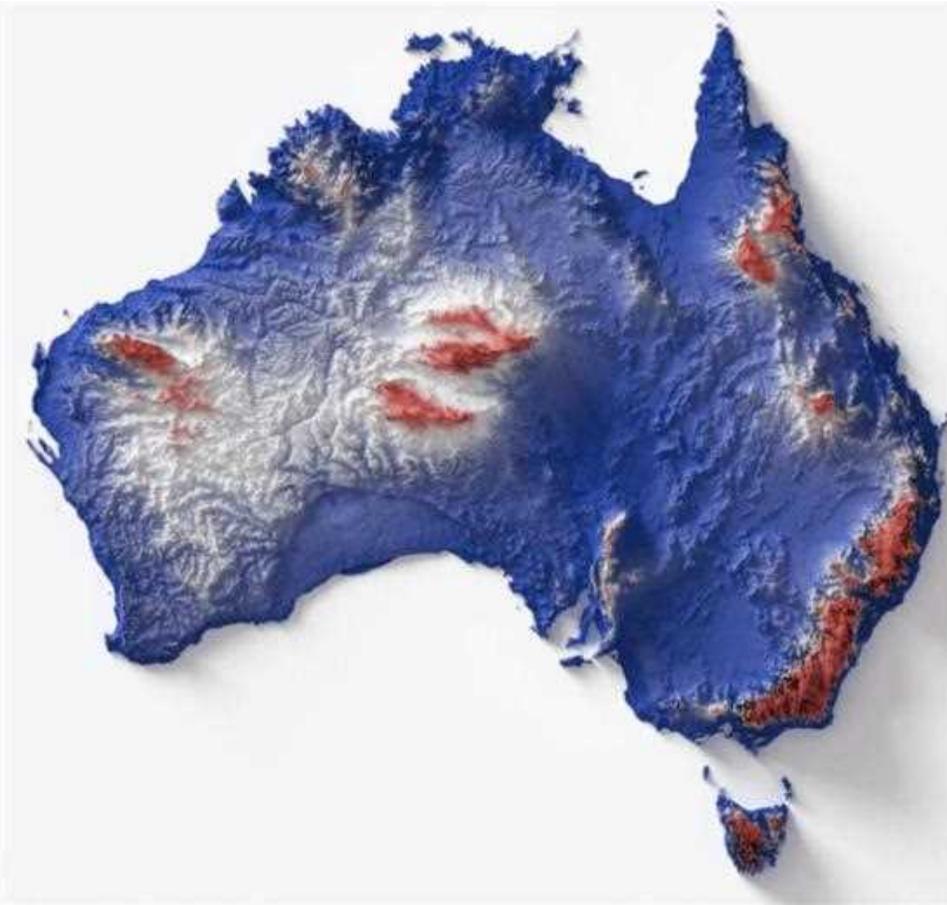
"I agree and I like driving Cruisers way better than Rovers. We got the cash to buy one?"

"Yes, I sold one of our many gold nuggets from the Sierra Asamablea and I have the money in my pocket. We can easily pay cash for the plane tickets, a Toyota, and whatever else we need on the adventure."

"When can we leave?"

"There is a flight to Darwin tomorrow at noon."

"Lesgobro and head for Molochlandia. Life with you is fun, Bobbybro."



***Moloch horridus* by Bãras**

## 2. *Crocodylus porosus* (Saltie).

The 23 hour flight to Darwin was absolutely grueling. But I had plenty of time to peruse every one of the thousand pages in Hal Cogger's volume on the reptiles and amphibians of Australia. Our youthful spirits were soaring like eagles as bro and I walked across the tarmac in Darwin, grabbed our one duffel, and got a taxi to the Toyota dealership.

Car salesman are the same the world over and this one was no exception. Billy knew a lot about Land Cruisers and asked the guy many questions that he was totally clueless to answer. But within an hour we had settled on the Cruiser we wanted and I peeled off the bills in my pocket and purchased it.

Driving on left side of the road was just plain impossible for me, but Billy made the switch with ease. He is quite versatile and incredibly good at anything physical, like driving. He drove us to the camping goods store and we purchased two red and two green metal Jerrycans, a nylon shade awning that attaches to the Cruiser, two sleeping bags, a shovel, four boards to put under the wheels, a tiny Svea burner, two headlamps, 30 batteries, and two telescoping fishing rods.

We filled the green cans with water and put petrol in the red can and Cruiser's tank and we were off, happy to see Darwin in the rear view mirror.

"Bobby, I know you are anxious to head into the interior, but I want to spend a day and a night on the beach surfing and frolicking."

"I hear you talkin loud an' clear, bro, but I don't think they surf nude down here in Oz. And the *Crocodylus porosus* will bite your assets off if you let them dangle in the water."

"Well, I ain't skird of no Salties and I never let my assets just dangle. Oz definitely has some real eye candy nude surfers and I enjoyed pictures of them nightly in my surfer magazine, that is, until the pages got stuck together."

Billy flashed his infectious smile that always works wonders with me. He found a pod of surfers and asked a dude if there were a clothes-optional beach. Lucas replied that there was but it was hidden away down near the billabong and difficult to find. He said he liked to surf nude there and if he could ride with us he would show us the way.

There Billy borrowed a board from Eva and for the rest of the afternoon he showed off his powerful wave movements and his considerable assets for everyone's

viewing pleasure. This led to the usual sequelae of much moonlight frolicking, and a fun time was had by all.

Afterwards Billy and I went on a long walk down the beach and we were thrilled to see our first-ever *Crocodylus porosus*. We sat silently gazing down at the billabong in the moonlight and engaging in deep brotalk.

"Billy, why do you like to frolic with these surfers so much?"

"Well, we enjoy each others' bodies and muscular movements on the boards and in the sand afterwards. That is something I don't get from selfing."

"Don't you feel strange doing this stuff when you are not emotionally involved with them?"

"Not at all, Bobby. For me love and sex are not connected, and that is important in our relationship"

"Well, I can accept that as long as you love me."

And Bro gave me a hug that said it all.



***Crocodylus porosus* by Andrew Watson**





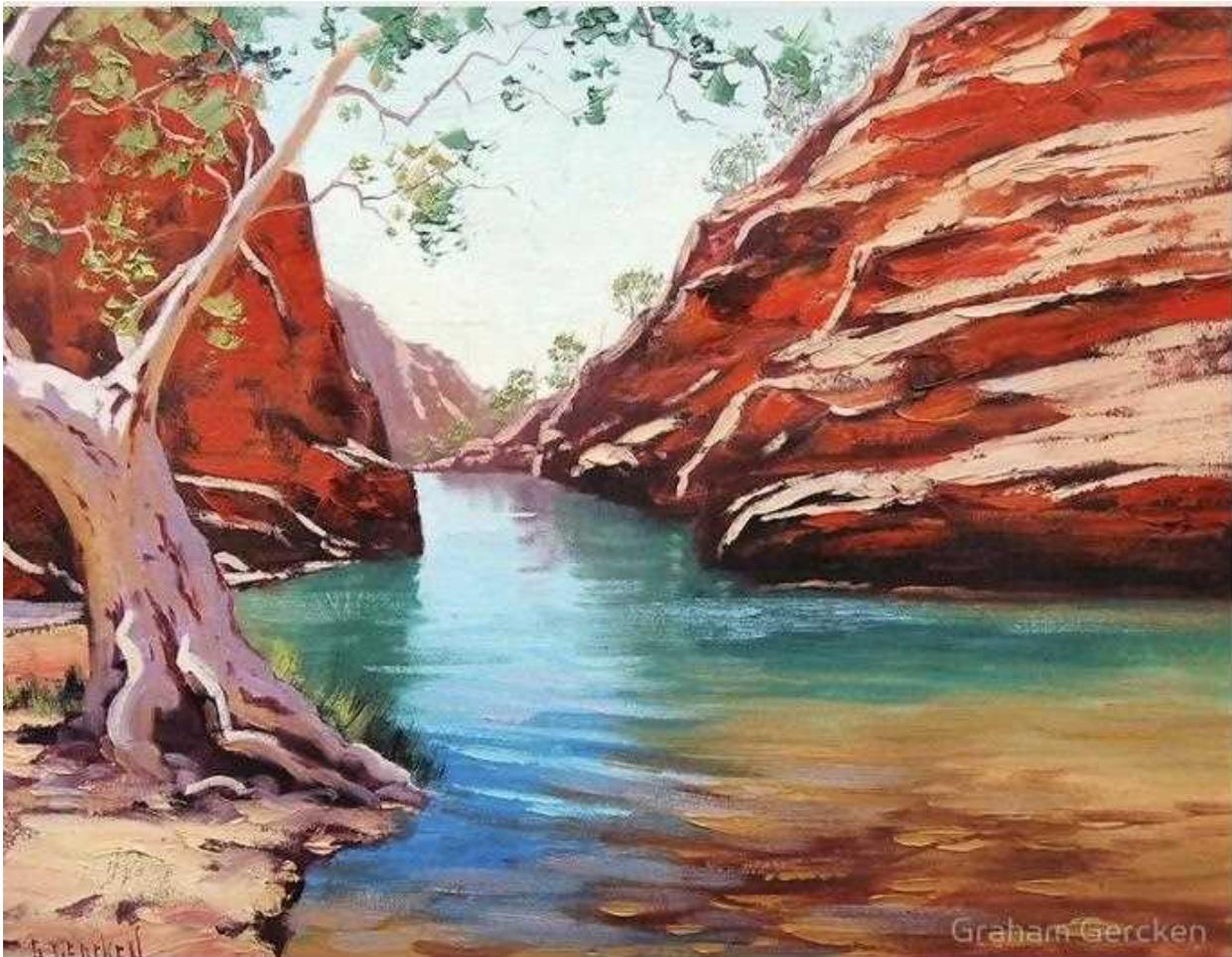
*Crocodylus porosus* by agami



**Eva**



**Billy**



**Australian landscape--billabong and red earth by Lammai Anne**

#### **4. *Antaresia childreni* (Children's Python).**

The Oz fireball from hell drove me from my sleeping bag. Billy was already up and had our little Svea burner going and the coffee dripped. His smile always does more than the caffeine to bring me around. We sat together a little long while sipping the coffee and gazing out at the lush vegetation around the billabong, imagining all the reptiles it surely harbors.

"Let's go get 'em," Billy declared as we headed out. I like herping with bro. He does all the lifting and flipping, and I just look and grab. But after three hours we had exactly nothing, zilch, zero, nada de nada, a total wipe out.

We were dripping in sweat and peeled of our shirts, but that just fed the mosquitos.

"Billy, Cogger lists over 800 species of reptiles and we can't find a damn one." Just then a kid walked up and I blurted out, "Why in the hell can't we find any reptiles?"

"Well bos, its cus white fellas can't see. Wuyubuyu is over there," Jarrad exclaimed.

And I could not believe my eyes. Coiled up on a rock was a magnificent *Antaresia childreni*.

And Jarrah accepted my white feller thank you hug.



***Antaresia childreni* by Scott Baker**



***Antaresia childreni* by Matt Clancy**





*Antaresia childreni* by nhbiesse



Jarrah

### 5. *Oxyuranus scutullatus* (Coastal Taipan).

Billy and I came to appreciate that Jarrah's skills were essential for us to find reptiles in the tropical savanna around this billabong. Fortunately the boy was willing to join us each morning before we headed out on our walkabout. And he always arrived and came through with one or more great finds. In all, he had showed us five snake species and nine lizard species around the billabong.

It was getting late and we were about to give up on our afternoon walkabout when Jarrah pointed to a long snake streaking away like greased lighting and yelled, "Taipan." That was one indigenous word that as herpetologists we knew well. Billy raced after the long *Oxyuranus scutullatus* and grabbed it by the tail. Bro did not usually do that foolish show-off routine with elapids, but he just got carried away in the excitement of the moment. We were all very relieved he did not get bitten by the highly venomous serpent and we did not have to carry him away.

On the walk back to camp Jarrah asked what we had to eat and we said peanut butter and crackers. He laughed and said we should hunt rabbits. He showed Billy how to use his boomerang to bag the lagomorphs. Billy, of course, soon became quite proficient and the two physical bros bonded tightly as hunters. We each devoured three braised rabbits.

Billy's fondness for Jarrah was growing by leaps and bounds and he suggested we might take the kid with us to Perth. As much as I thought that would be beneficial for us and our herping, I had to be blunt with bro.

"Billy I can clearly see you love Jarrah but I do not think it in the boy's best interest to take him away from this place and his people."

I did my best to help Bro heal from his heart-ache.





**Jerriah**



©Shane Black

***Oxyuranus scutellatus* by Shane Black**





***Oxyuranus scutellatus* by Hasani Douglas**



***Litoria coerulea* (Australian Green Tree Frog) eating an *Oxyuranus scutellatus* by Jaime Chapel**

### **6. *Leurognathus gilberti* (Gilbert's Dragon).**

Billy had helped me through many a heart-ache in Mexico when I had to let a kid go and move on, and I tried to help him survive parting from Jarrah. Its easy to love a Mexican kid because their culture is so much more human than that of gringos. But falling in love with a kid whose people have wandered the desert for fifty thousand years is all-together different. But it is the nature of love that it can bridge the eons of separation. We are indeed all one species.

And physical Billy did recover by driving Cruiser down the increasingly sandy tracks as we inched our way from the semi-tropical vegetation of the north coast

towards the vast deserts of central Australia. Watching him drive I could appreciate that his muscle movements were indeed the very core of his being.

"Bobby, the scrub is beginning to thin. Let's make another station before we head down into the Tanami Desert."

"You got it, bro." How many times have I said that to Billy? But those few words said it all, reassuring him that I knew exactly what page he was on this very moment and that he could always count on me no matter what else happens. Bros are forever.

And four-wheeling us into a totally isolated camp surrounded by many kilometers of pure scrub was of course the best medicine for Billy. We set up the shade canopy and sat close together for an hour letting our bro feelings take charge.

Then we heard it. The sound of the yidaki (digeridoo) is like absolutely no other instrument in this world. Its deep mellow reverberating tones carry great distances across the desert.

"Let's go have a look Bobby," and bro was off like a shot and I raced after him. Eventually he found the musician. Nullah was sitting all alone playing his yidaki. The boy paused and looked up at Billy, "Wasup, mate?"

"That is beautiful, please do not stop," Billy exhorted. Nullah just closed his eyes and continued his song of the desert. Billy was swept off his feet, "Could ya teach me how to play?"

"Sur, mate, I teached white fellas bafor. Thays slow, but sums good."

Billy and Nullah spent the rest of the afternoon sitting together with the yidaki and of course physical bro had the necessary wind and picked it up right away. And it was positively the best therapy imaginable for Billy.

Eventually the yidaki playing was over and I had a chance to mention that we were looking for lizards and snakes. Nullah said he did not know much about them but his friend Bronte knew everything about reptiles.

Nullah and Bronte arrived at dawn for our reptile walkabout. We had taken no more than a few steps when Bronte spotted a beautiful *Leurognathus gilberti*. I started to get out my telescoping rod and Bronte motioned for me to stop and he gently caught the lizard. I fell in love with dragons and their friends.



***Leurognathus gilberti*** by Mark Hura



***Leurognathus gilberti* by Liznoble**



***Leurognathus gilberti* by Mark Clarke**

### 7. *Acanthophis rugosus* (Rough-scaled Death Adder).

Billy and I were just plain having fun. We were right near the line of demarcation between the coastal tropical savanna and the Tanami Desert and with the help of Bronte and Nullah we were seeing the nature of the herpetofaunal transition. It seemed like a gradual transition rather than a crisp abutment.

And we were thrilled that the boys had helped us find the herps in this transition. They began sleeping at our camp so we could take nocturnal walkabouts together. They were amazed that bro and I used separate sleeping bags as they slept without anything and kept each other warm.

The kids of course were ace boomerangers and Billy delighted in hunting rabbits with them. Braised rabbit sure beats peanut butter and crackers any day. The boys even joined us in our puesta del sol bro sits. Billy and Nullah played their yidakis and then we all four sat close together sharing our bro feelings.

After the rabbit feast, darkness fell upon the land, and we set out on our nocturnal walkabout. Billy and I donned our headlamps and the kids thought it amazing we needed them to see in the dark. "White fellas don't see."

As we headed out suddenly Bronte yelled, "Tjudi!" That turned out to be his word for the *Acanthophis rugosus*. I would have tread on the Death Adder if I had taken one more step. I was happy that he had prevented a serious envenomation and that he accepted my hug as "white fella thanks."

Out came my Nikon. The very heavy-bodied elapid was indeed a viperid look-alike except for the down-turned rostrum. Nullah was interested in my photography and I liked showing him the ropes. He was innately artistic and I could easily see he was not interested in mundane documentary images. His photos were magnificent works art. Everywhere I go I find that the people that the world just writes off as "ignorant savages" are anything but. They are intelligent, sensitive, and creative far beyond most people in our culture.



***Acanthophis rugosus* by Shane Black**



***Acanthophis rugosus* by Richard Reams**



***Acanthophis rugosus* by Stephen Zozaya**





### **8. *Pogona microlepidotus* (Kimberly Bearded Dragon).**

It was to be our last day at this camp and we headed out at dawn on our walkabout with Bronte and Nullah. We soon happily added three snake species and five lizard species to our survey of this locality. I had become intrigued by agamid Dragons ever since the kids showed me the first *Leurognathus gilberti*. I was delighted when Bronte gently caught and handed me a strange kind of Bearded Dragon.

I poured over Cogger's book for hours and finally concluded the Dragon was a *Pogona microlepidotus*, a species with a very limited distribution in the Kimberly region. Its presence suggested we were still in the coastal tropical savanna and had not yet entered the true Tanami Desert.

This Dragon started me musing about the nature and origins of the Australian herpetofauna. There are species with small geographic distributions tucked in little pockets scattered here and there over the entire continent. Yet there are no easily identified geographic barriers, often invoked as necessary for species formation. Just what has generated this high level of species richness in Oz? I had identified the question that would haunt me for years.

It was time to say goodbye to Nullah and Bronte. Tears were in my eyes when Nullah presented Billy with a beautifully painted yidaki and Bronte gave him an

equally exquisite boomerang. And I was delighted that the kids had allowed me the white-fella way and accepted my hug and then waved goodbye as we drove away.

Deakin, J.E., Edwards, M.J., Patel, H., O'Meally, D., Lian, J., Stenhouse, R., Ryan, S., Livernois, A.M., Azad, B., Holleley, C.E. and Li, Q. (2016). Anchoring genome sequence to chromosomes of the central bearded dragon (*Pogona vitticeps*) enables reconstruction of ancestral squamate macrochromosomes and identifies sequence content of the Z chromosome. *BMC genomics*, 17, 1-15.

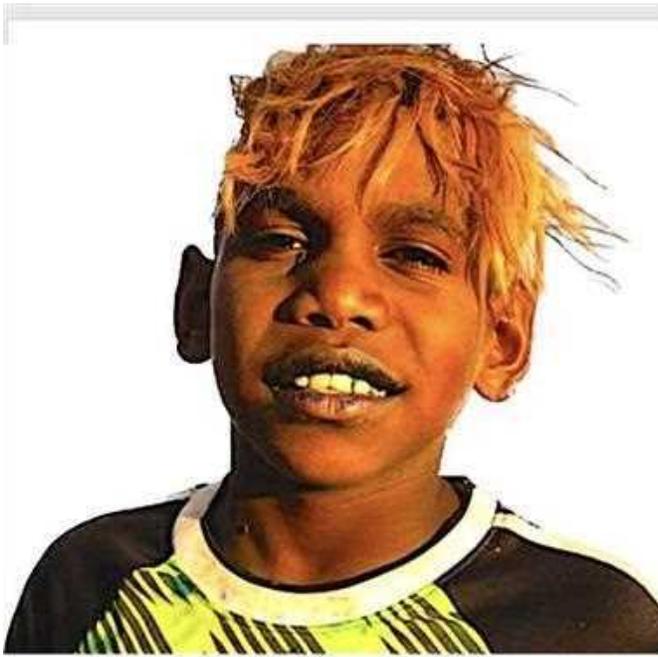


***Pogona microlepidotus* by Travis Reeder**



***Pogona microlepidotus* by J. Fontaine**



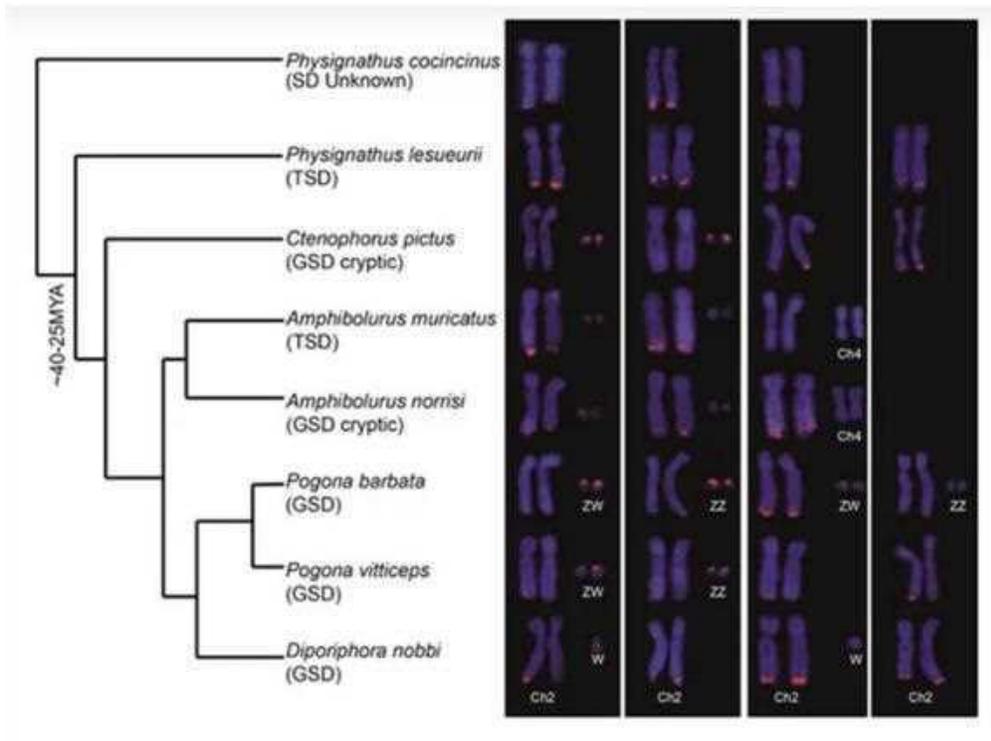


**Bronte**

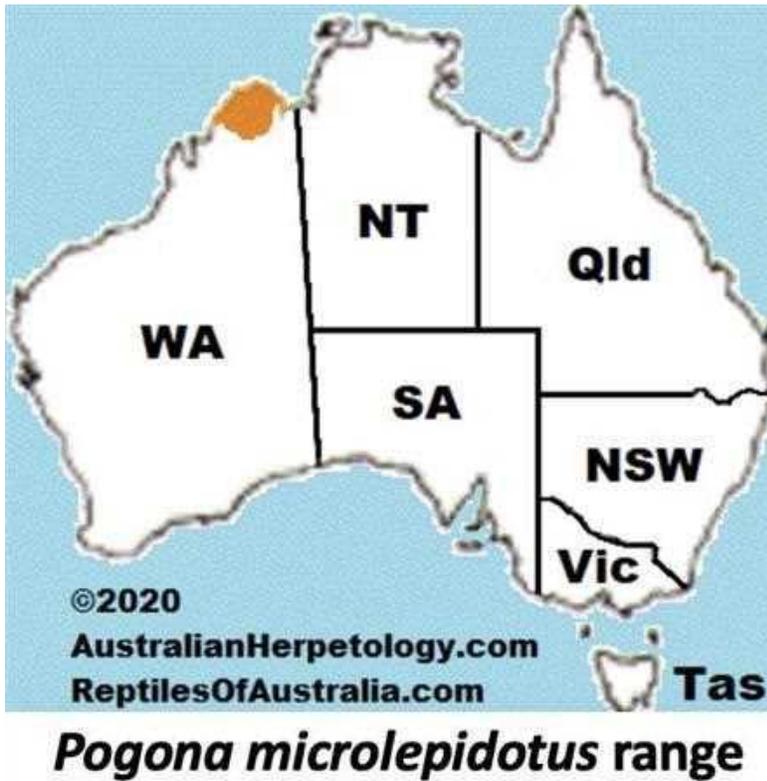


**Nullah**





From Deacon et al. (2016)



### **9. *Varanus glauerti* (Kimberly Rock Monitor).**

After our tearful separation from Bronte and Nullah, Billy and I turned a corner on our addictions to kids. We came to appreciate that to enjoy a kid in Oz we should let him run free in his native habitat, and not try to capture him and place him in a terrarium. Even if we legally adopted a kid he would eventually grow up and leave us. Here in the far outback there was an endless stream of indigenous kids to love and each one represents a unique new experience for Billy and I to enjoy. We also were free at last.

I had carefully planned our route in the Tanami as I did not want to see any of the disgusting mining operations. As we headed into the Tanami I once again came to appreciate that the Sonoran Desert is a lush thornscrub compared to true deserts in Africa or Australia.

We came across a kid walking along the track with a backpack. Jiemba said he was on his way to school and we offered to give him a ride. He hopped in and we asked how far the school was. He just replied, "a little long way."

An hour later we arrived at the school trailer and were overjoyed to see all the smiling kids. The teachers came out to greet us. We were shocked to learn Edvin and Omar were from Sweden.

They invited us to spend the day with them at the school. We connected with the two at a deep level and soon all four of us were talking bro to bro. Billy and I were very curious to know just how they came to be teaching school here in the middle of the Tanami Desert.

"Well, we just became totally disenchanted with the our culture' and wanted a more meaningful life. We joined the EcoCor to survey the biota of the Tanami Desert and when the tour was up we realized we never wanted to leave. The Northern Territory government was looking for teachers and we signed on and have never looked back.

"These kids are a pure joy and we love each one. It is a real challenge to help these people find their way in the modern world without losing their wonderful culture. The key to it all is their continuing to speak their native language. I am good at languages and easily leaned to speak Kriol with them. Most of the kids also know Oz English as well. Would you two be willing to give them a presentation today on reptiles?"

Billy did not hesitate one nanosecond. "Would I ever!"

And when he got up in front of the kids, a completely new Billy emerged. As a physical bro he was not usually a big talker. But that changed immediately and he became an dynamic performer speaking individually to each kid. They responded big time to his animated talking and he enthralled them. He ended with, "Now kids, lets do a walkabout and you teach ME about reptiles."

The kids went whooping out the door galloping wildly into the desert. We saw so many different species that day I had trouble photographing them all. Then Jiemba came in carrying a magnificent *Varanus glauerti* and I went into ecstasy and gave the boy a big hug. I looked up at Omar worried the hug might have crossed some red line of the school and he just smiled and declared, "Not to worry, Mate, these kids know that is the white-feller way and accept hugs from Liam and me often."



***Varanus glauerti* by Joanne Rapley**



***Varanus glauerti* by Henry Cook**



©Stephen Zozaya 2012

***Varanus glauerti* by Stephen Zozaya**





**Edvin**

**Omar**



**Jaime**



### **10. *Pseudonaja mengdeni* (Western Brown Snake).**

Billy and I were becoming increasingly fixated on one magnificent species we had failed to find, *Moloch horridus* (Thorny Devil). With the help of Edvin and Omar we asked all the kids at the school about *Moloch* and they seemed not to know them. But it was Liam's opinion that the kids simply did not want to reveal anything about the species because of the lizard's association with dreamtime.

Jaime thought his father might know about the dreamlizards but he lived far back in a billabong. The boy had bonded strongly with Billy and eventually he agreed to take us on a little long walkabout to meet his father.

It was a day's walk to reach Jaime's billabong. When we arrived his father, Waru, was waiting for him on his raft. We asked Jaime how Waru knew he was coming and he just said, "Blackfellas know."

Waru did not speak English but Jaime was bilingual and helped us communicate. Waru said that his brother knew dreamlizards and he could take us to him in a little long while. We were not permitted to enter the billabong but Waru said we could sleep on the bank.

Waru and Jaime poled the raft across the billabong leaving Billy and me for who knows how long. We did not have our sleeping bags or headlamps. I started to feel uneasy about this entire situation and began to wish we had brought Edvin and Omar with us as they understood the people's ways.

Billy spotted a large saltie (*Crocodylus porosus*) in the billabong and I suggested we should move to higher ground to spend the night before it was totally dark. In the dim twilight Billy spotted a *Pseudonaja mengdeni* and wanted to do a tail grab. I simply had to stop him one way or another from doing this dangerous foolish stunt here in the middle of nowhere.

There was no way I could physically restrain Billy and I just cried out, "I luv ya Billybro." The words reached him, worked their magic, and he stopped and gave me a hug instead of tail-grabbing the Gwardar.



***Crocodylus porosus* by pbertner**



***Pseudonaja mengdeni* by Adam Brice**



***Pseudonaja mengdeni* by Ross McGibbon**



***Pseudonaja mengdeni* by Adam Brice**



**Waru**



### 11. *Varanus gouldi* (Sand Goanna).

Billy and I made it through the three-day night without sleeping bags, staying warm by sharing our body heat, and we rejoiced as the Oz fireball from hell reached Jaime's billabong. After it had warmed up Jaime and Waru arrived on their raft.

Jaime again helped us communicate with Waru. The *Moloch* dreamlizards were a totem of Waru's brother and we could do a walkabout and visit him. I tried to determine the time and distances involved, but Jaime said Waru did not reckon these things the way whitefellas do, and just said it was a little long way.

Billy was always up for adventure and just said, "Lesgobro."

"Billy are you sure you want to set off into the Tanami Desert without food and water following two indigenous guys looking for dreamlizards?"

"Bobby, you either want to see a *Moloch* or you don't. I can go by myself if you don't want to go."

"You got it, lesgo, Billybro."

We walked for long while and were starting to get really famished when Waru and Jaime called a "smoko stop." They headed off with their spears and soon returned with 8 rabbits. Jaime had them skinned and on skewers in no time flat, while Waru demonstrated his skills with the traditional method of starting a fire without matches. We ate the rabbits "bones and all" and then Jaime curled up against Billy for kip.

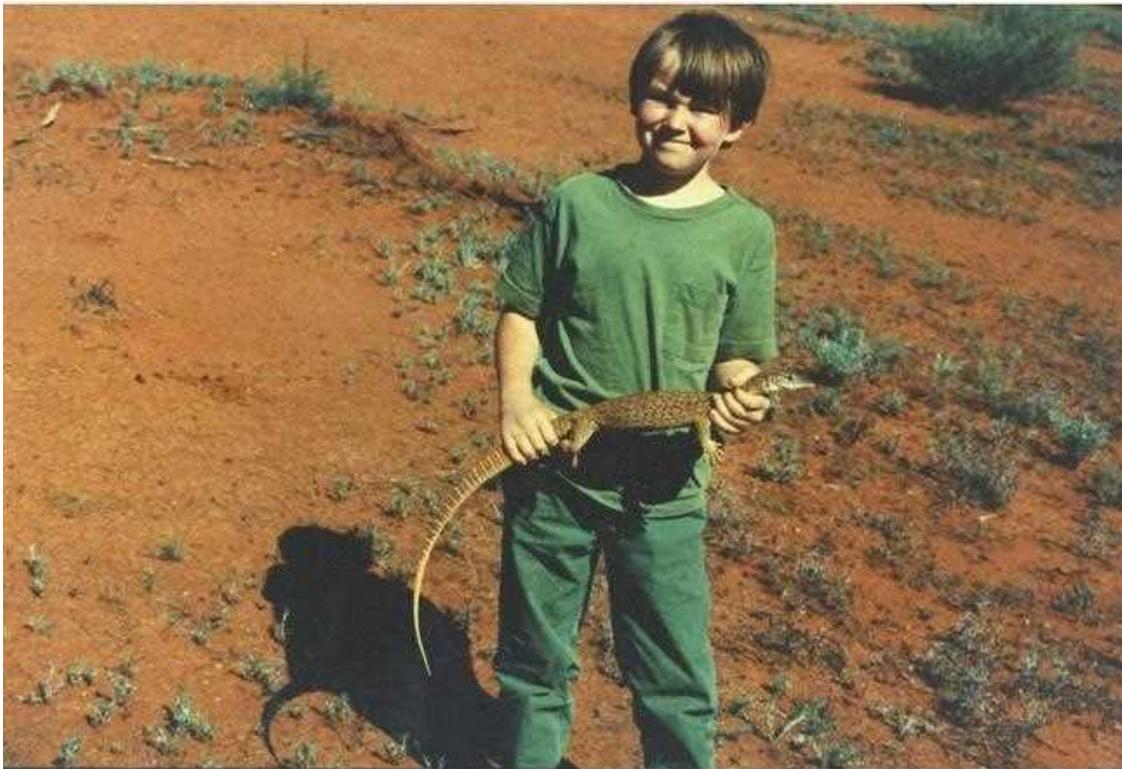
After we awoke from kip a *Varanus gouldi* came wandering through and Waru grabbed his spear. Jaime was able to intercede and plead for the goanna's life, explaining that lizards were the totem of us two whitefellers.



***Varanus gouldi* by Jens Sommer-Knudsen**



***Varanus gouldi* by Michael Barrett**



**Kit Bezy with *Varanus gouldi* by Kathryn Bolles**



**Varanus gouldi by earth unreal**



**Waru**

## **12. *Varanus gilleni* (Gillen's Monitor Lizard).**

Once I became confident that Waru could find food and water in the desert I began to relax and enjoy the walkabout much more. I particularly liked that he walked along at a leisurely pace. He was a true desert wanderer, and just sauntered along not fixating on his destination.

This was definitely a learning experience for Billy who considered walking to be some sort of physical race to get somewhere as fast as possible. I rediscovered my personal philosophy, "Wherever we are, that is where we will be."

Waru and Jaime did not hunt rabbits every night. Their bush tucker included bird eggs and Witchetty grubs. The grubs are the larvae of the cossid moth, *Endoxyla leucomochla*. Whenever we came upon a Witchetty Bush, *Acacia kempeana*, we would stop and dig with our fingers into the sand between the roots to find the grubs.

We ate them alive. At first the feeling of the large larvae wiggling in my mouth was disconcerting, but I came to enjoy eating the grubs.

Waru knew the location of billabongs and we drank from them. Sometimes it was too far between standing water sources, and Waru knew particular spots where he could dig deep enough in the sand with his hands to reach water

Jaime had relayed to Waru that lizards were the totem for Billy and me, he showed us many species, and I was very happy to get photos of them all. He took us to a sand flat that he said had a lizard that lives only there. We were absolutely delighted when he turned up a diminutive *Varanus gilleni*, perhaps the Earth's smallest varanid.



***Varanus gilleni* by Stephen Mahony**

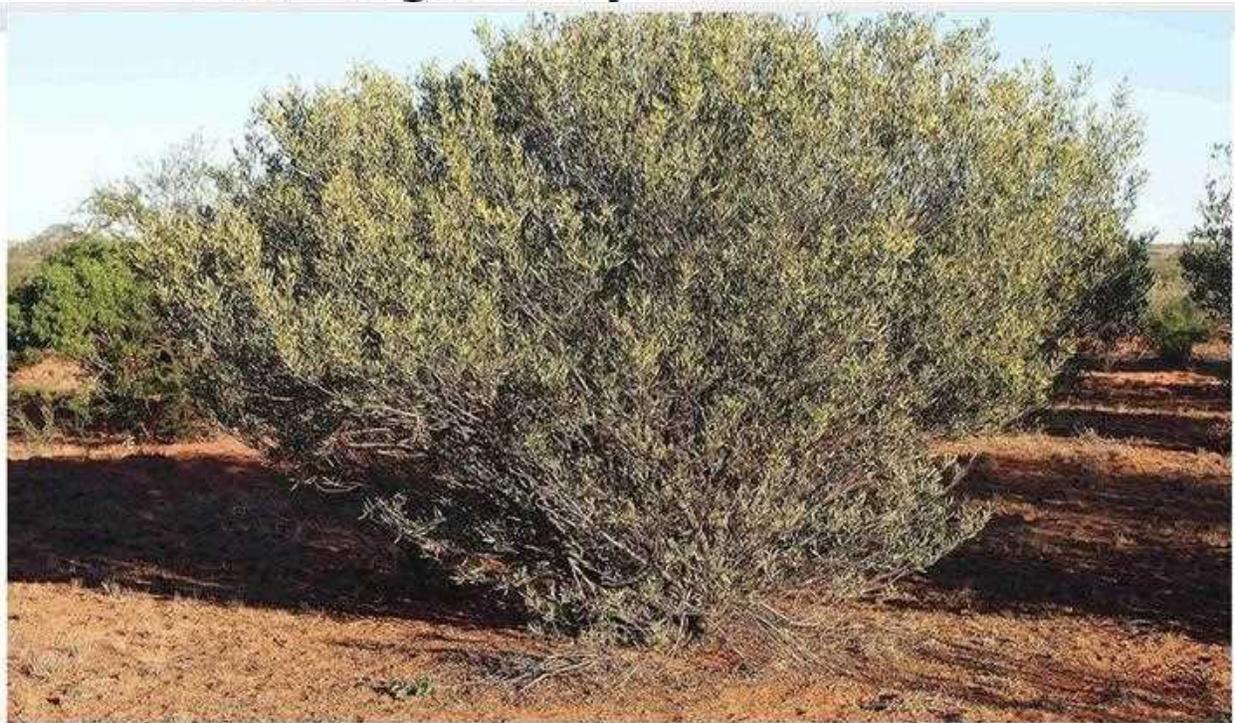


Stephen Mahony

***Varanus gilleni* by Stephen Mahony**



***Varanus gilleni* by Stu Nielsen**



***Acacia kempeana***



**Waru**



***Endoxyla leucomochla***

### **13. *Moloch horridus* (Thorny Devil).**

The days rolled along and I lost track of just how long Billy and I had been on this Tanami walkabout with Jaime and Waru. Jaime relayed that his uncle David lived with a white woman and her son and we were not permitted to go there. Jaime and Waru would go find David and bring him out to us.

As Jaime and Waru trudged off to get David I panicked.

"Billybro, what if they never came back for us? We have not the slightest idea where in the hell we are or how to get food or water without them."

"For shit's sake, Bobby, you have to learn to trust people. Jaime and Waru have taken good care of us so far. Why do you not trust them?"

"Billy, they are humans, and the human species is made of feces."

"That is true in America, but this is the Tanami Desert and these are good people, Children of the Earth."

Billy's faith in Jaime and Waru turned out to be justified and they returned in a little long while with David.

Jaime translated that David said that it was, Elder, the father of Waru and David, who knew the heartplace of *Moloch*. At dawn we would go to find Elder.

I had another major breakdown. "Bro, this is absolutely bonkers. This is just some sort of goddam indigenous fantasy. These people do not live in the real world. They are just making this whole damn thing up."

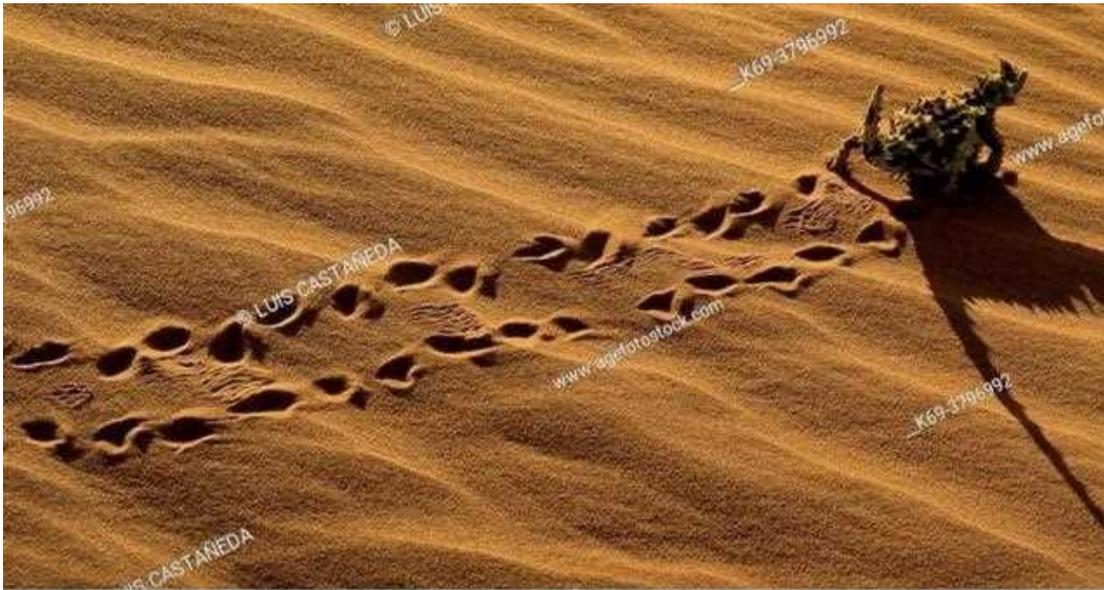
"Bobby, you are the fake. You are not a scientist. You do not trust your own observations. Jaime and Waru have shown us many species of lizards and demonstrated detailed knowledge of them. They could have left us for dead anywhere along the way. But, no, they did not. They gave us water and food and even shared their body heat with us to get through the cold nights. These are my observations and I am a scientist and believe my observations. It is you, not Waru, David, and Jaime, who live in fantasia. For shit's sake Bobby, trust these people."

And Billybro gave me a hug.

Dawn came and we trudged on. By midday we arrived at the camp of Elder and his people and a little corroboree ensued. Billy guessed it was probably *Datura* that they were using. I declined, but adventurous Billy gave it a try. When he passed out I was terrified. I was all alone with these wild men and a nearly dead bro somewhere deep in the Tanami Desert.

Jaime saw that Billy was unconscious and he went and got Waru, David, and Elder. They began chanting and dancing around Billy. Bro suddenly opened his eyes, struggled to his feet, and joined in the dance.

At dawn Billy and I set out with Elder, Waru, David, and Jaime to reach the *Moloch* heartland. After a little long while Elder suddenly stopped, put his head against the sand to see the surface, and pointed out the distinctive tracks of *Moloch*. He followed the tracks over the dunes for a little long way, and there it was, the lizard I have dreamed of seeing my entire life, *Moloch horridus*.



***Moloch horridus* by Luis Castañeda**



***Moloch horridus* from Eric Olson**



**Elder**



***Moloch horridus* by Stu's Images**



*Datura stramonium* by Artmajeur



**Waru**



**David**



**David**



**Elder and his grandson Jaime**



**Gubba and David**

#### **14 Moloch Man.**

Elder tracked down three more *Moloch horridus* (Thorny Devils) and we were in absolute ecstasy looking at these truly mystical desert-adapted spiny reptiles.

And we had now completely adopted the walkabout spirit and lost all sense of time. I had come to fully accept that our indigenous friends would take care of us, providing food, water, and direction on our walkabout.

Jaime relayed that Elder had helped a whitefella with Moloch and the guy was camped in the desert. This really got my attention. Could there really be a white guy way out here in the Tanami living with Moloch?

"How far away is this whitefeller Moloch man?" I asked Jaime.

"Elder says it is a little long way." Jaime replied.

"How long would it take us to get to him?"

"A little long while."

"Billy, this is just crazy. Do you suppose there could really be a 'whitefeller Moloch man' living out in the middle of the Tanami?"

"Ah Bobbybro, there you go again not trusting these people. If Elder says he can take us to him we should go. It's the chance of a lifetime and we would be fools not to embark on an adventure to find this guy. Les go bro"

So off Billy and I trudged following Elder, Waru, and Jaime for who knows how long or how far to find the mysterious "Whitefeller Moloch Man."

Jaime had taught Billy how to hunt rabbits with both the boomerang and spear and the two had become tightly bonded hunting bros.

Jaime would distract the lagomorph from the front and Billy would silently circle around and come in from behind and throw either his spear or the boomerang, depending on distance.

They seldom missed and we enjoyed an abundance of braised rabbits on a skewer capped off by witchetty grubs. At night we all slept in a pile to share our body heat.

Eventually we sighted the whitefella's camp. Wade Surestream welcomed us and began talking about his research on *Moloch horridus* with an incredible enthusiasm the likes of which we had never before experienced.

Wade had studied the ecology and behavior of many species of *Phrynosoma* (Horned lizards) in North America and he was finding that Moloch was even more specialized. Their ant diet was narrower and their bodies more thorny to protect them from predation as they sat exposed while snapping up thousands of ants. They deposited their feces in a pile to prevent predators from following the scent.

But the most incredible key to their survival in the vast hyper-arid deserts of Australia is that these lizards have evolved fine structures in the skin to harvest water. Utilizing the hygroscopic force of liquids, water is channeled to their mouth from the rare rains, the dew, and, incredibly, even from damp sand. The skin has evolved microscopic channels to harvest the extraordinarily scarce moisture of the desert.

Billy and I were thoroughly infected by Moloch Man's enthusiasm for desert adaptations.

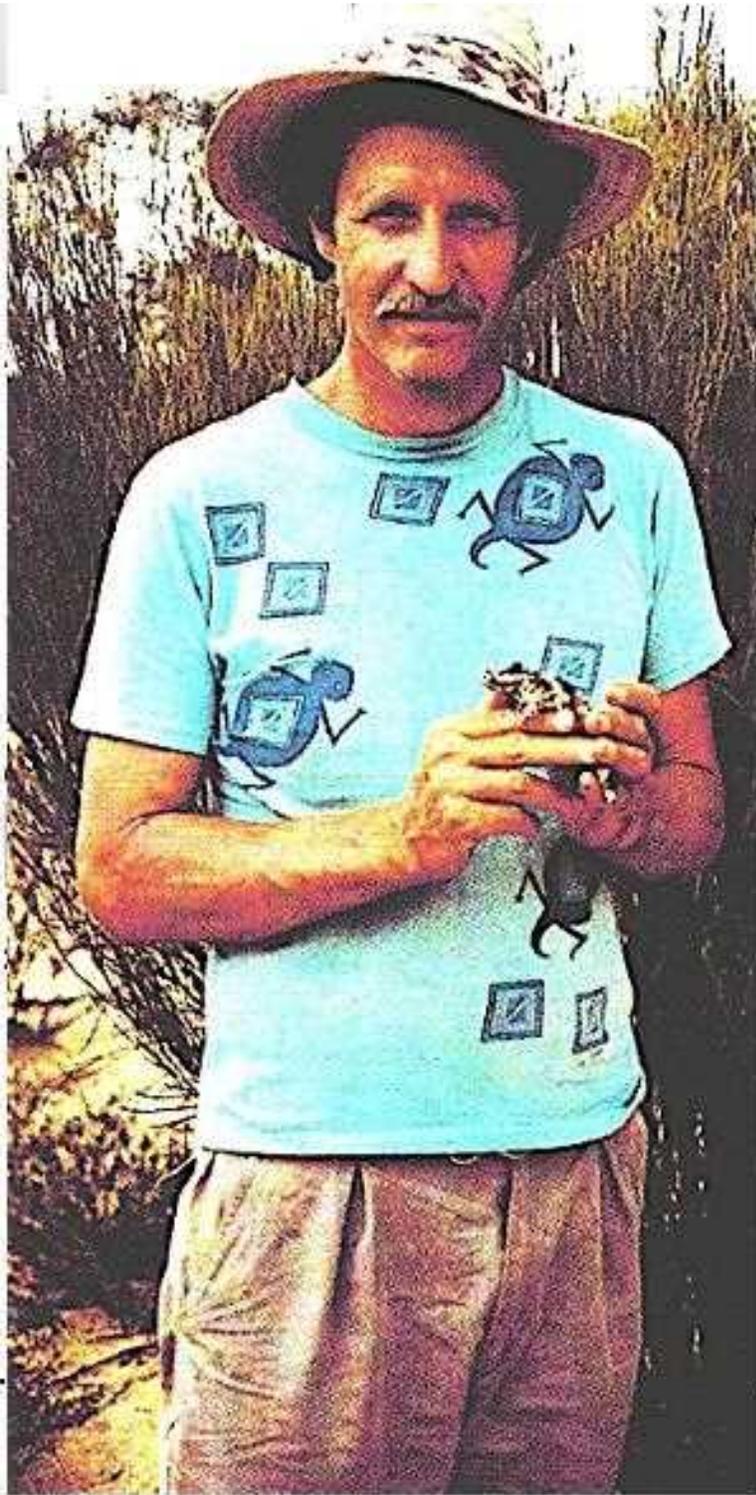
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**Wade Sherbrooke**  
**with *Moloch horridus***



***Moloch horridus* by Wade Sherbrooke**



***Moloch horridus* by Wade Sherbrooke**



***Moloch horridus* by Wade Sherbrooke**



**Wade Sherbrooke with *Moloch horridus***



***Moloch horridus* by Wade Sherbrooke**



### 15. *Acanthophis pyrrhus* (Desert death Adder).

We parted with Edvin, Omar, Jaime, Waru, and Elder and left the Tanami heading for the Great Sandy Desert.

"Billy, that was one hell of a willy willy with way too many people swirling around and I need some quiet bro time with you to reconnect. Can you find us a place to sit together for a little long while?"

"You got it, Bobby. I see an interesting looking billabong in the far distance and I will see if Cruiser and I can get us to it."

This was all quite predictable. I knew Billy needed some 4X4 driving time to get his rocks off. And that was an important prelude for the quiet bro time with him I needed. Billy and I had been through this little routine many times and we both knew it to be an important component of our bro feelings.

The billabong did not appear to have any crocodiles and Billy and I dove in for an afternoon dip in the cool water. Afterward we sat close together enjoying the sun on our backs, and our bro feelings began to emerge anew.

Billy had his spear and boomerang, but he decided not to hunt rabbits that afternoon and he enjoyed playing his yidaki instead.

After peanut butter and crackers we had a headlamp walkabout and just as we were giving up for the night my beam illuminated a Death Adder stretched out on a rock. I was not at all sure what species it might be. We had seen *Acanthophis rugosus* (Rough-scaled Death Adder) up top and *Acanthophis cryptamydros* (Kimberley Death Adder) in the Kimberley and this looked different from both. After studying the serpent carefully I concluded it was *Acanthophis pyrrhus* (Desert Death Adder).

I was happy Billy did not feel a compulsion to bare-handle the snake. The color and name brought back pleasant memories of the *Crotalus pyrrhus* I found in the mines near Black Mountain when I was a kid in Arizona.



***Acanthophis pyrrhus* by Brad Chiplin**



***Acanthophis pyrrhus* by dhfischer**



***Crotalus pyrrhus* by Thomas Brennan**





**Billy**



**Roja**



**Red**



**Pyrrha Nikos**



Pierre-Narcisse Guérin: *Andromaque and Pyrrhus* (1810)

**16. *Pogona minor mitchelli* (Mitchell's Bearded Dragon).**

"Billy, I am having trouble understanding this situation. My problem stems from not seeing any differences between these deserts in Oz. Back in North America, the Chihuahuan, Sonoran, Mohave, and Great Basin Deserts have conspicuous differences in landscape vegetation that can be easily seen at just a glance.

"But when we were in northern Kenya I did not see obvious vegetation changes as we walked from the Koroli Desert into the Chalbi Desert. Here in Australia we just traveled from the Tanami Desert into the Great Sandy Desert, and I do not see the differences at all. Do you, bro?"

"This is really ironic, Bobby. You call me your physical bro, and that is just what is involved here. In North America the different deserts are defined on biotic criteria, particularly their vegetation. Here the defining features are physical rather than biotic. The Oz deserts are mostly sand and rocks. And the various dunes fields and topographic features, rather than vegetation, define the different deserts."

"Billybro, you are amazing. You always see the big picture and I always way underestimate your observational powers."

"Well that is what physical bros are for, Bobby. Now I have a challenge for you, my biobro. How does reptile biodiversity originate across deserts defined only by their dune fields and arid mountain ranges when the species are not limited by them. What are the isolating features and what are the adaptational selective pressures that generated the staggering reptile species richness of central Australia?"

"Cheese n crackers got all muddy, Billy, that is one hell of a homework assignment you just gave me. Maybe by the time we get to Perth I might have some guesses, but right now, let's just go on a little walkabout and see what lives right here in this desolate landscape."

And we had not gone far when Billy took out his telescoping rod and noosed a Bearded Dragon basking on a rock. As with the *Acanthophis* I had difficulty figuring what species he had in his hand. After pouring over Cogger for hours I concluded it was *Pogona minor mitchelli*. It may be an important part of the key to understanding the reptile diversity in central Oz. It seems the species of *Pogona* have evolved complex sex determining mechanisms and these may foster species divergence within the genus.

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***Pogona minor mitchellii* by Brian Bush**



***Pogona minor mitchellii* by Brad Maryan**



***Pogona minor mitchellii* by Brian Bush**



### **17. *Ctenotus inornatus* (Plain Ctenotus).**

Billy is a natural born water boy, most at home in the sea, lakes, rivers, and even billabongs. So we always camped at a billabong where we could enjoy a dip together in the heat of the day after our morning walkabout. And finding and getting us to these little pockets of water and trees added a 4X4 driving component to our Oz adventures that bro relished.

On our morning walkabout we found lots of skinks of the genus *Ctenotus*. They seemed to be members of the *Ctenotus inornatus* complex, but I was not able to conclusively determine which species we had found. Indeed, perusing the literature on these skinks convinced me that color pattern is too variable to be diagnostic. Molecular data indicate that these and other Oz arid-center species began diverging in the Miocene and their distributions seem to have been extensively modified by all the climate changes that have taken place over the last 15 million years.

After the lizard walkabout we had our afternoon billabong dip and were enjoying bro time when a canine came running up and began lapping up the water. Billy's eyes lit up and he approached the carnivore with a left over rabbit leg. The dog

accepted the meat and took to Billy and they immediately bonded deeply. Billy and dogs are a natural fit, physical buds, if there ever were any.

"Billy, these dingos are not domestic dogs, they are wild carnivores."

"There you go again with your judgmental views. For shit's sake, just open your heart to this dingo."

And Billy was right. Dingos straddle the line between wild and a domestic dogs and they often adopt a human family and/or vice a versa. And I found it was a wonderful animal. Soon two indigenous boys came sauntering up and asked if we had seen their kurpany.

"What is a kurpany?" Billy asked.

"It's what you white fellers call a Dingo," Ngarra replied.

"Well, is this him?" Billy replied, the dog in his arms.

The boys ran up and hugged Kurpany. And this was the beginning of a new family: Billy, Ngarra, Iluka, Kurpana and me. The boys helped us hunt lizards and snakes in the morning, dipped in the billabong with us in the afternoons, and hunted rabbits with Billy at sunset. Eventually they began joining our headlamp walkabouts and spending the night with us.

Pepper, M., & Keogh, J. S. (2021). Life in the "dead heart" of Australia: The geohistory of the Australian deserts and its impact on genetic diversity of arid zone lizards. *Journal of Biogeography*, 48(4), 716-746.

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***Ctenotus spauldingi* by Dan Ashdown**



***Ctenotus inornatus* by Adam Brice**

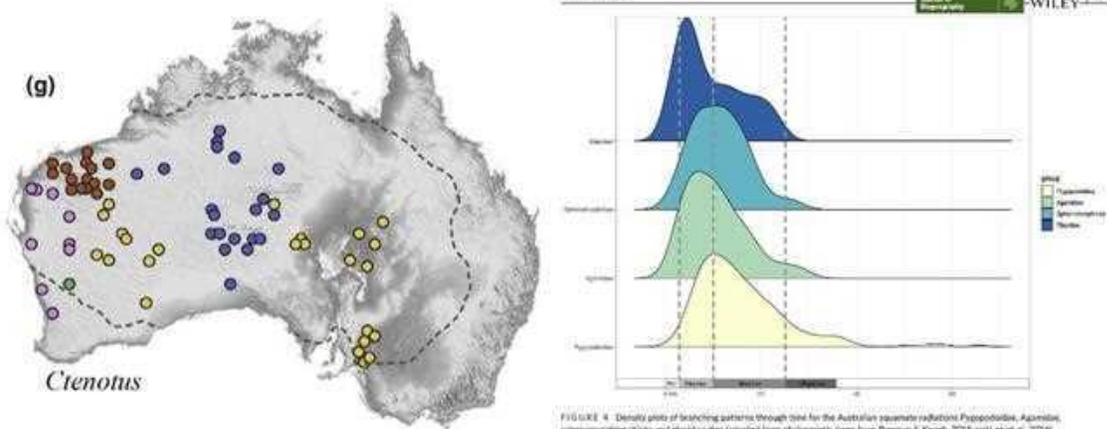




**Kurpana**



***Canis lupus dingo* by William Robinson**



**From Pepper and Keogh (2021)**



***Canis lupus dingo* by sueg0904/Fotolia**

### 18. *Delma desmosa* (Desert Delma).

Ngarra turned out to be an ace herper and showed us many species of reptiles around the billabong. He also enjoyed playing his yidaki and hunting rabbits with Billy in the evening. Kurpana provided the glue for our little family and helped keep us all warm at night.

Ngarra said there was one special reptile that lived in the region that we had not found yet near our billabong. He knew a place where it was common, but it was a little long way from here. Because of our experiences in the Tanami, we had become hesitant to set off on walkabouts to places described in such terms. But, Billy was able to pin down that it was a day away.

It was a glorious dawn and our youthful spirits were soaring like eagles as we set out on an adventure to find Ngarra's mystery reptile. Its identity intrigued me as he was not sure whether it is a lizard or a snake. After a few hours of walking the boy led us to a billabong for a rest in the shade of the Eucalyptus trees, a dip, and peanut butter and crackers.

Refreshed we set out on the afternoon walkabout and by sunset we arrived at the billabong of the mystery reptile. Ngarra and Billy headed off with their spears and boomerangs to hunt and they soon returned with enough rabbits for all of us including Kirpana. We topped off the meal with a mouth full of Witchetty Grubs.

We were up at dawn flipping like maniacs. Ngarra eventually found one of the mystery reptiles and Billy and I went into ecstasy. It was a *Delma desmosa*, a member of the Pygopodidae, an Oz endemic family that is related to geckos and that we had never seen before. Like snakes, the species lacks limbs and eyelids, but it has external ear openings like most lizards. In all we found five *Delma desmosa* under rocks around the billabong.

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Wilmer, J. W., Amey, A. P., McDougall, C., Venz, M., Peck, S., & Oliver, P. M. (2020). Comparative mitochondrial phylogeography of two legless lizards

(Pygopodidae) from Queensland's fragmented woodlands. *Israel Journal of Ecology and Evolution*, 66(3-4), 142-150.



***Delma desmosa* by jksmitz**



***Delma desmosa* by Brendan Schembri**



***Delma desmosa* by Brendan Schembri**



**Ngarra**

**19. *Aspidites ramsayi* (Woma Python).**

Billy felt the urge to depart from the Great Sandy Desert and head into the Gibson. But, as we were saying goodbye to Ngarra, Iluka, and Kurpana tears rolled down my cheek.

"Billy, I am desperately in need a bro talk. Can you find us a billabong?"

That was always a good starter for Billy and me as he always enjoyed a challenging 4X4 drive and I liked watching him. Bro deliberately picked out a billabong that was difficult to get to and we both began to unwind.. It turned out to be a magnificent oasis and we enjoyed a dip and then sat close together silently until I spoke.

"Billy, this continual forming of deep attachments with kids when we camp and then having to leave them is tearing me apart."

"I hear ya bro. I do have this strong need for others and I easily move on."

"Well, Billybro, I hope you never move on from me. You are all I need and want. Why do we have to have anyone else?"

"For shit's sake, Bobby, these kids find all the reptiles for us and you know I feed on social contacts."

"Billy, I think what we are missing here is that we are not always having exclusive bro time when there are others around. So, can we change that from now on, and never let a day pass without us sharing some bro intimacy?"

"You got it Bobby." And his hug said it all.

Even though the Gibson did not have conspicuously different vegetation, it grabbed me big time. It is very difficult to pinpoint why a particular landscape has such a profound effect on me, but it has to do with the word "grandeur." I would call it topographic charisma, and Arizona and the Gibson are two places on Earth that have it in abundance.

"Billy, lets just camp here at this billabong for a few days. I want to reconnect with the Gibson and with you.

"You got it Bobbybro. And this billabong is big enough for me to do some serious swimming. Unlike you, I have to use my muscles to get my rocks off. "

Then I spotted it, a very large snake stretched our on a rock.

"Holy shit, Billy, it's an *Aspidites ramsayi* !" It and *Aspidites melanocephalus* are my favorite Pythons.



***Aspidites ramsayi* by Jono Searle**



***Aspidites ramsayi* by Adam Brice**



***Aspidites ramsayi* by Melissa Bruton**



***Aspidites ramsayi* by Adam Brice**





Jack Randall with *Aspidites melanocephalus* (Black-headed Python)



20. *Neobatrachus sutor* (Shoemaker's Toad).

In the Gibson Desert Billy and I found peace. Billy's long swims in the billabong gave him the daily body movements he craved so strongly, and I liked watching him using his muscles. Billy encouraged me to swim with him until I became exhausted.

Bro became very good with the yidaki and I enjoyed listening to him after our bro sit. He taught me to hunt rabbits with him and I became adept at approaching the lagamoroph from the front with just enough movement to keep its attention, but not to cause it to flee. I could easily read bro's body language and that helped me time my movements with his. Sneaking up from behind he used either the spear or the boomerang.

After our rabbits and grubs feast we began feeling a rumble beneath our bare feet. The thunderheads gathered, the earth shook, and the flashes lit up the desert night. When the deluge hit bro and I danced in the rain.

Soon a deafening anuran chorus began and we donned our headlamps. I was shocked by how much *Neobatrachus sutor* with their elliptical pupils resemble *Scaphiopus couchii* (Couch's Spadefoots) of the Sonoran Desert.



***Neobatrachus sutor* by Angus McNab**



***Neobatrachus sutor* by Stephen Mahoney**



***Neobatrachus sutor* by B. Maryan**



***Scaphiopus couchii* by Erik Enderson**









### 21. *Varanus tristis* (Black-headed Monitor).

I was very happy at our billabong in the Gibson Desert, but of course Billy eventually felt the itch to move on. I knew him like my hand and his appetite for adventure runs deep and that appeals to me.

The sandy tracks in the Gibson were devoid of other vehicles and we were surprised to see a jeep parked beside the track. No one was visible and we decided to stop and investigate.

We spotted two guys way far off in the distance and walked out in the desert to see if they needed any help. We were saw that they had a *Varanus tristis* in hand.

"What are you guys doing with the goanna?" I inquired.

"We are studying the ecology and behavior of *Varanus tristis* in different habitats."

We immediately took to them and they invited us to camp with them for a few days and join in their study.

"We would really like that I replied immediately."

We spent the day with them observing, photographing, and video taping five *Varanus tristis*. We returned back to camp I Erik as more than a little embarrassed when I explained that Billy and I needed some separate time together. But they understood entirely. "I hear ya talkin bro. Noah and I would not still be together if we did not have some exclusive time with each other every day."

After our exclusive bro time Billy played the yidaki and then he and Noah went rabbit hunting and witchetty digging. Our new friends found the grubs difficult to swallow.

We decided that we would not do a lamp walkabout on our first night and just sat and talked with Kolton and Noah until dawn. Their enthusiasm for studying the ecology and behavior of reptiles was inspiring and a good combination with our interest in herp biogeography and evolution. The conversation eventually turned to personal matters and they re-iterated that most Aussies are not very liberal about gender orientations and that they preferred to keep a low profile.



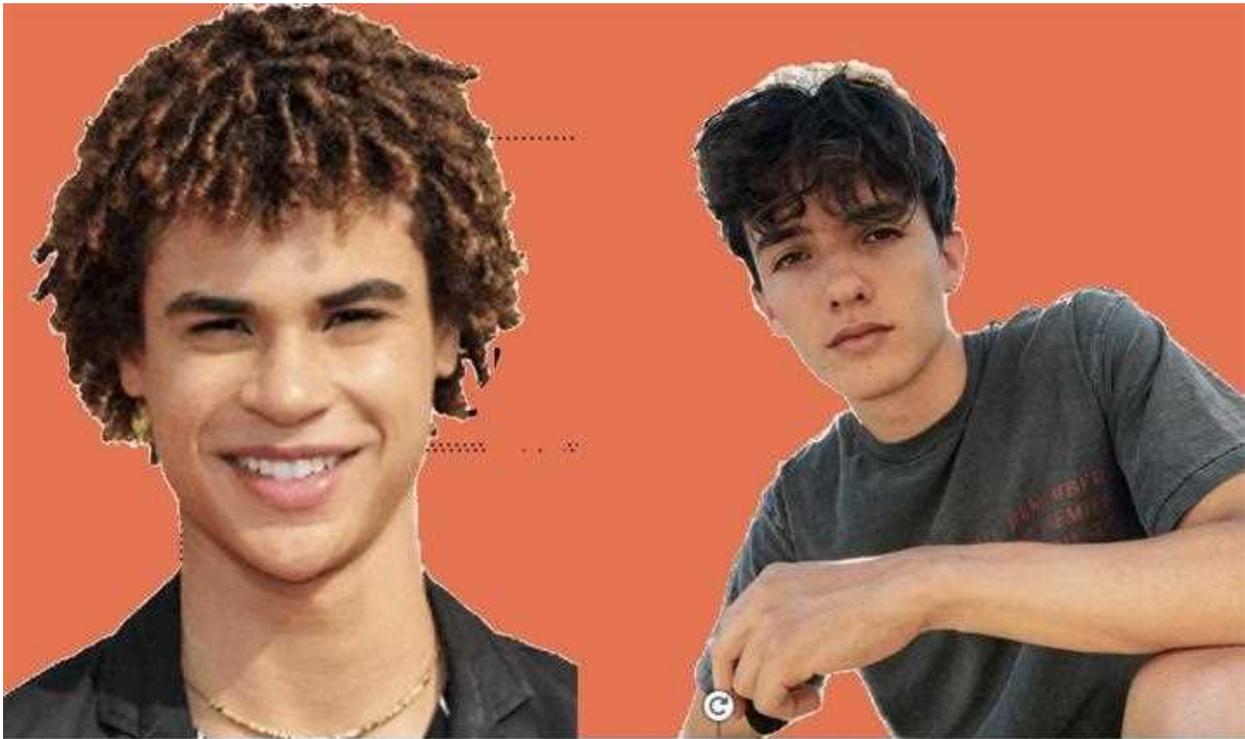
***Varanus tristis* by Gondwanaland reptile productions**



***Varanus tristis* by Philip d'Auvergne**



***Varanus tristis* by Sainz**



**Kolton**

**Noah**



***Varanus tristis* by Nathan Litjens**



**Juvenile *Varanus tristis* by Hezus Montay**





## 22. Billy and the Perentie.

Noah explained that he and Kolton were doing a comparative study of the ecology of the large goannas in the Gibson. They had radio collars on some species but none on *Varanus gigantea* (Perentie).

"They are just too dangerous for us to catch and collar," Noah declared.

"Well, have your collar ready and I will wrestle one fur ya," Billy declared.

"That is just plain dangerous, Billy," I exclaimed.

"Nah, it can't be that bad, and I love wrestling, muscle against muscle."

I knew that once Billy set out on a physical challenge there was no turning back, so I just let him head out on his adventure. Billy and I were shocked when I saw the Perentie. It was absolutely humongous. But bro had to show us he could overpower it. And I had to believe in Billy's bravery and muscle power.

"I will rush in and drag it off the boulder and into the open. When I have it secured, you three come running in with the collar," brave bro declared.

The skirmish that ensued was absolutely horrendous. Perenties are very strong from fighting with each other and they have sharp teeth and claws and a powerful tail. I detected he was starting to have second thoughts but he had resolved to show

he could do it. After the incredible struggle we got the collar on the parentie and then Billy lovingly returned the reptile to its perch atop the boulders.

Billy was seriously shredded and Noah took out his first aid kit and helped me triage which cuts were so deep they had to be sutured and which needed only careful bandaging.

"Ignoring the possibility of toxic saliva, the main concern with monitors is infection from bacteria on their claws and teeth. We need to apply a very strong disinfectant to the lesions and start a round of systemic antibiotics," Noah declared.



***Varanus gigantea* by Kathryn Bolles**



***Varanus gigantea* by Kathryn Bolles**



**Andrew Ucles with *Varanus gigantea*.**



***Varanus gigantea* by Jeroen Dunnink**





**Andrew Ucles with *Varanus gigantea*.**

### **23. *Ctenophorus caudicinctus* (Ring-tailed Dragon).**

We said goodbye to Kolton and Noah and headed deeper into the Gibson Desert. It continued to hold magic for me, with an abundance of landscape charisma. Billy loved it as he was four-wheeling all day. We suddenly came upon our first camels and we stopped to photograph them. That is when we met Kirra and Tommy. They were studying the impact of the feral camels on the ecosystem. Kirra explained:

"Camels were introduced to Australia in 1840 and played a major role in the gold rushes that began in the 1850's. It is estimated there are about 350,000 feral camels living in Oz today. Their ecological impact has not been looked at in the detail needed. They foul the water sources we first Australians depend on. With climate change they may become even more destructive to the water and vegetation"

"Wow, Kirra, you really know your stuff," Billy proffered.

"If you guys want to camp with us for a day Tommy and I can show you some of the reptiles around here."

"Yes we would like that," Billy immediately accepted.

She immediately pointed out a magnificent *Ctenophorus caudicinctus* climbing in a bush.



***Ctenophorus caudicinctus* by Robert Valentic**





***Ctenophorus caudicinctus* by Stephen Mahony**



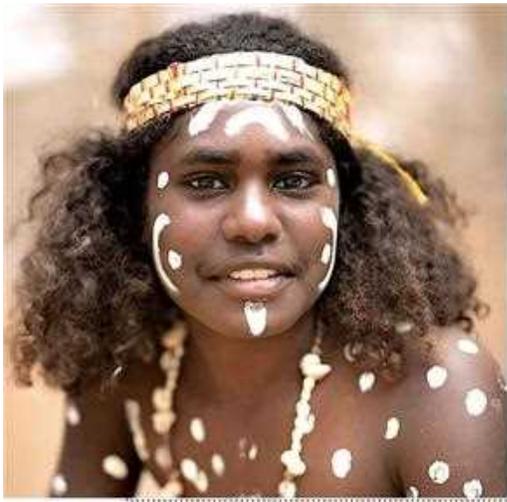
***Ctenophorus caudicinctus* by Travis Reeder**



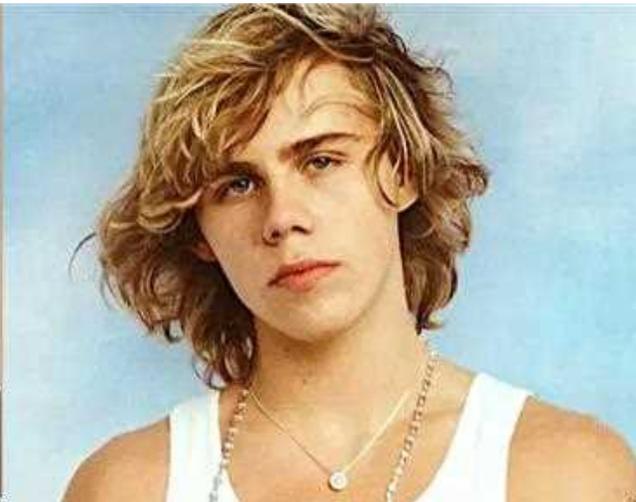


***Ctenophorus caudicinctus* by Cemone Hedges**





**Kirra**



**Tommy**



**24. *Demansia reticulata* (Reticulated Whipsnakes).**

The tracks just got more and more sandy as we headed across the Gibson into the Great Victoria Desert.

"Billy, I am not sure we can make it across all this sand."

"I will get us there. Have I ever failed you?"

"No bro, you always come through."

Just then we bogged seriously. Out we jumped, jacked up Cruiser, put down the planks, and I got in and gunned while Billy pushed. But the track was going right up the sheer dune face. Hours later and after three bogs we made it up over the crest.

A Nasticophis-like snake whipped across the track. Billy dove for it and got it by the tail just as it was escaping down a hole.

"Billy, that is a venomous elapid, *Demansia reticulata*. I wish you would give up this tail-grabbing addiction of yours."

"You worry way too much, bro. A guy gots to have a thrill and get his rocks off somehow."

"There is a much safer and simpler way for one to get his rocks off, Billy."

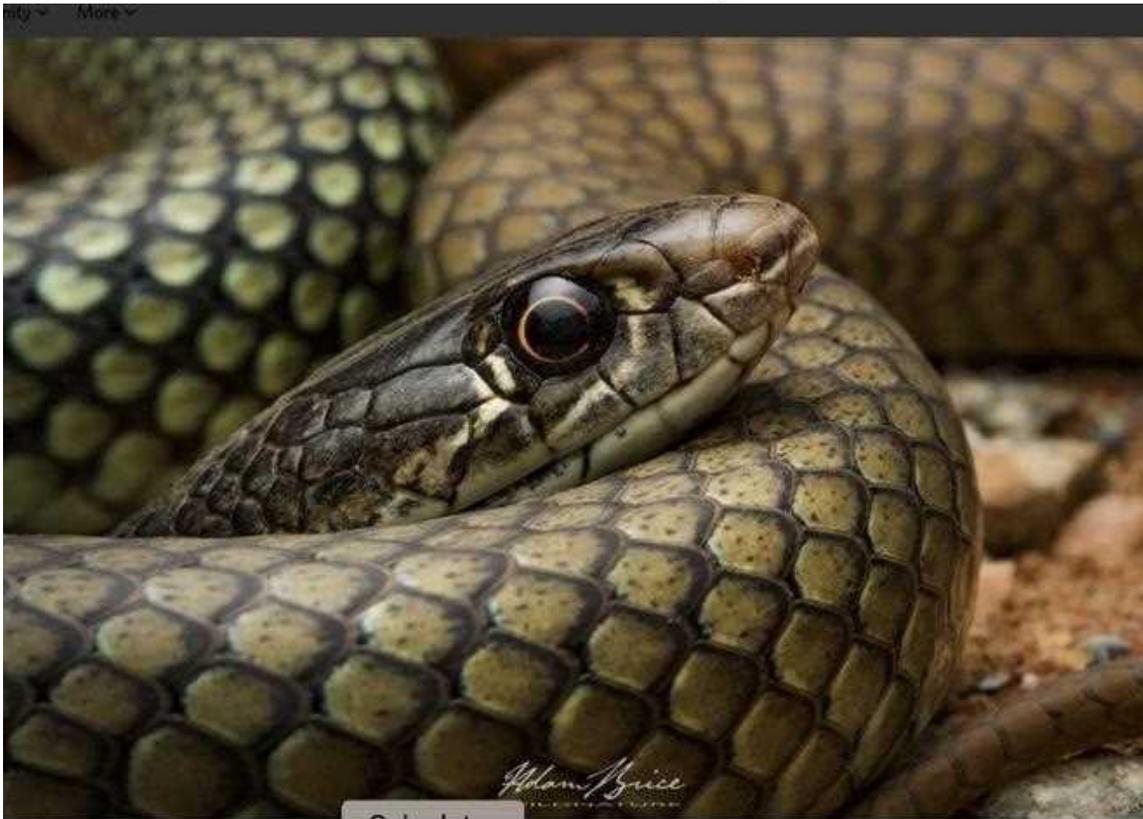
"You would know, bro." And we both laughed.



***Demansia reticulata* by Adam Brice**



***Demansia reticulata* by Adam Brice**



***Demansia reticulata* by Adam Brice**





**25. *Varanus brevicauda* (Short-tailed Pygmy Monitors).**

"Bobby, I think I see a shade campy over there on that far dune. Who do you suppose could be camped way out here out in the middle of the Great Victoria Desert?"

"I don't see anything there. It's probably just a mirage of some sort from your sunburned retinas."

"I think it's real. There is only one method of discovery and that is observation. Let's walk out there and have a look."

"Lesgo, Billybro."

And, as usual, Billy turned out to be perfectly correct. There was no one at the camp when we arrived, but eventually two guys came walking up. We were shocked to meet Eric Bianka and Laurie Fit, the deans of desert lizard ecology.

They welcomed us and invited us to camp with them for a while and help document the lizard diversity.

We spent an incredible week with Eric and Laurie and they showed us an enormous number of lizard species.

I particularly liked the little *Varanus brevicauda*. "It is interesting that they do not have an elongated neck like that of large monitors," I commented.

"That is probably because they are arthropod feeders and the long neck of large species facilitates ingesting large prey items such as mammals," Billy conjectured.,

Late into the night we discussed lizard species diversity and then Laurie entertained us with his music. Billy joined in for a few numbers with his yidaki.

Pianka, E. R. (1969). Habitat specificity, speciation, and species density in Australian desert lizards. *Ecology*, 50(3), 498-502.

Pianka, E. R. (1994). *The lizard man speaks*, University of Texas Press.

Pianka, E. R., & Vitt, L. J. (2003). *Lizards: windows to the evolution of diversity* (Vol. 5). Univ of California Press.

Pianka, E. R, and Vitt, L.J. (2019), *Our One and Only Spaceship: Denial, Delusion, and the Population Crisis*. Barnes and Noble.

Vitt, Laurie J. 2022. *The Queen of Dragon Street*.

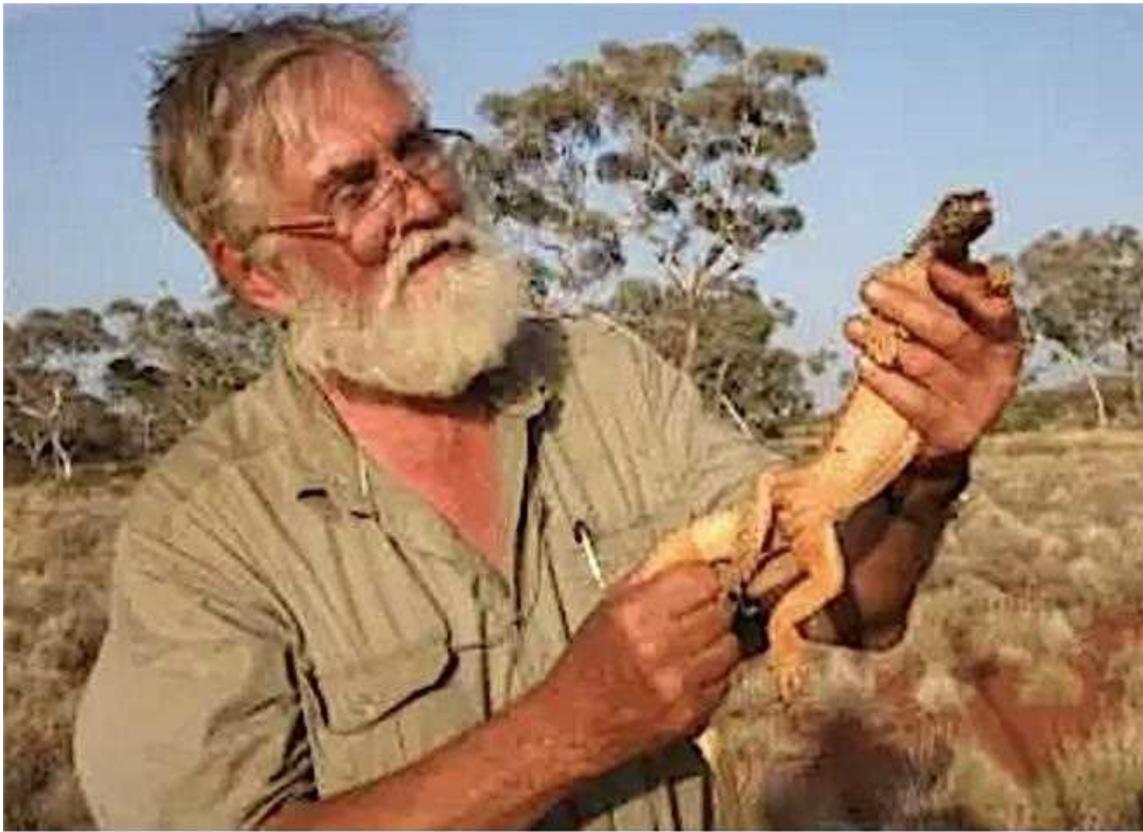
<https://www.youtube.com/channel/UCVdVxfyj2epE7>



***Varanus brevicauda* Broome Bird Conservancy**



***Varanus brevicauda* by Angus McNab**

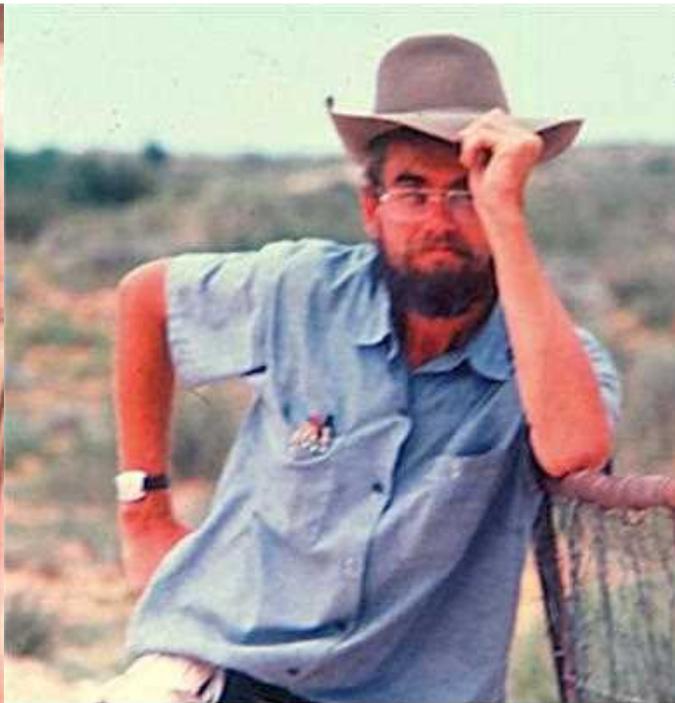


**Eric Pianka**



©Eric Pianka

*Varanus brevicauda* by Eric Pianka



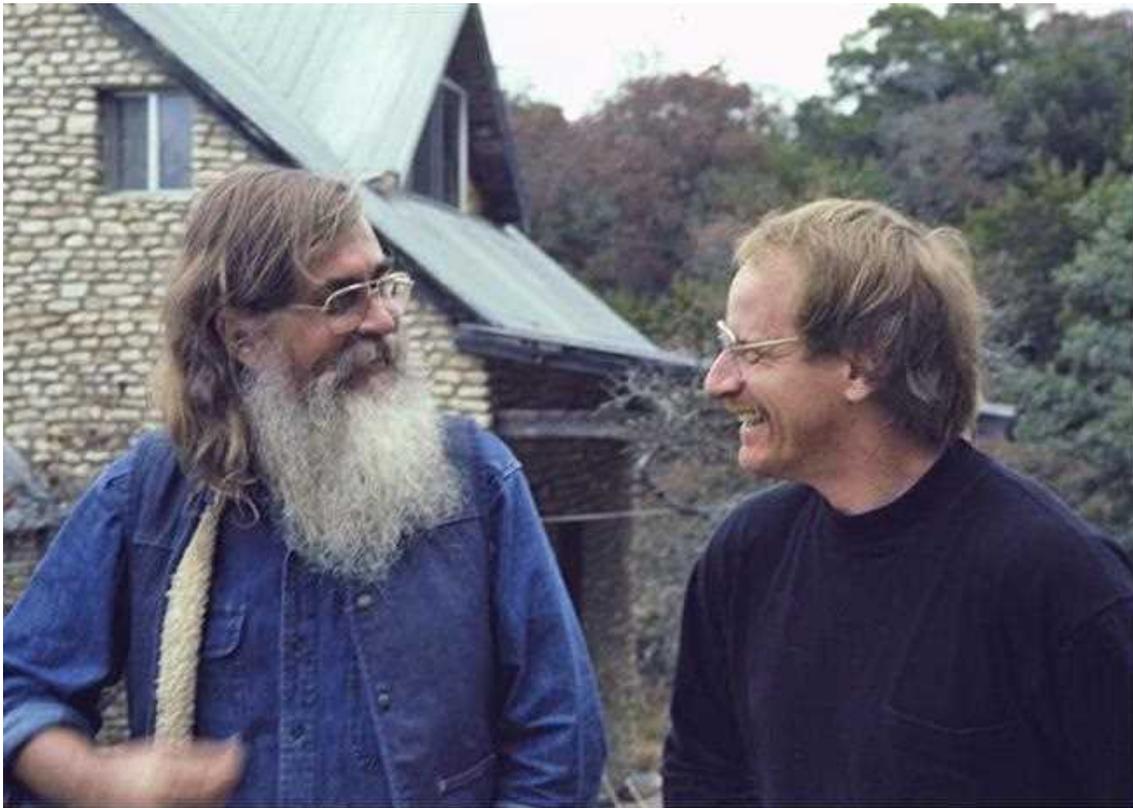
**Eric Pianka**



**Laurie Vitt (right) and Don Shepard with *Lachesis muta***



**Laurie Vitt (with saxophone) and band**



**Eric Pianka (left) and Laurie Vitt (right)**

**26. *Liopholis kintorie* (Great Desert Skinks).**

We said goodbye to Eric and Laurie and headed deeper into the Great Victoria Desert.

"Billy, lets find us a billabong where we can recuperate. I need to decompress after that week with those energetic ecologists. It was an interesting experience, but we failed to keep our promise to each other to have exclusive bro time every day and I feel distant from you."

"Life is like that, Bobby. We can only travel the paths we encounter. Bro time just did not seem in the cards while we were with them, they were just not on our social wave link. But we can make up for lost time, especially if I can find us a billabong large enough for me to exhaust myself swimming."

Billy checked out several billabongs, but declared them too small. Just when we were about to give up he spied a magnificent grove of eucalyptus ringing water large enough for him.

We dove in and I soon exhausted myself, but bro swam for hours. Afterwards we sat silently close together for a long time gazing at the reflections in the water while Bro played his yidaki. In the interest of fostering our tranquility he did not hunt rabbits that night. We returned to our old standard, peanut butter and crackers, and then laid down gazing up at a billion stars.

The next afternoon a kid wandered by our camp and we explained that we were looking for lizards and snakes. Tau said that he just hunted goannas for food but his friend Jarran knew all about Tjakuras. Billy was able to glean that they were some sort of lizard.

We set out the following morning with Tau to visit his friend Jarran and the Tjakuras. We were not prepared that this little walkabout would take an entire day. When we finally arrived and met Jarran we were shocked to discover he had an in-depth knowledge of reptiles.

He was particularly keen on Tjakuras which we eventually discovered were *Liopholis kintorie*, large skinks that live in colonies. Working with Liz Sincere from Perth he was examining the genetic consequences of the lizard's unique family colonies. They live in large communal burrow systems up to 10 m long that are inhabited by a monogamous pair of skinks and their offspring.

"We are looking at the genetic consequences of monogamy and this family social unit. I observe the lizards and when Doctor Liz visits and we get tail tips for DNA analysis at the University. I have seen cases in which a male has "extramarital affairs" and copulates with a female in another family community. This occasional out-breeding by males may be important in fostering genetic diversity."

"Wow, Jarran, you are really something. How did you get so far into this stuff?" I asked.

"Well, I hunted Perenties with my father but I was not happy with killing and eating them. I would sit and watch the huge lizards for hours. Dad eventually came to accept that I was a lizard spirit and promoted my communing with them. Doctor Liz came here from Perth and discovered my knowledge of Tjakuras and she recruited me to do this study with her. We are interested in the genetic parallels of these lizard communities with the clan structure of my people."

Dennison, S., McAlpin, S., Chapple, D. G., & Stow, A. J. (2015). Genetic divergence among regions containing the vulnerable great desert skink (*Liopholis kintorei*) in the Australian arid zone. *PLoS One*, 10(6), e0128874.



***Liopholis kintorei* by Gondwanaland Reptile Productions**



***Liopholis kintorei* Jay's Reptile World**



***Liopholis kintorei* by M. Whiting**



**Tau**





**Jarran**



**Elizabeth Sinclair**



**27. *Nephrurus vertebralis* (Midline Knob-tailed Gecko).**

"Billy, I am working on formulating a hypothesis and want to camp in the dunes for a few days. Can you be away from the water that long?"

"For you bro, I will happily do anything. I want to get into taking long solo runs across the dunes. Can you be without me for a little long while each day?"

"You're on, Billy. You know I would never put you in chains."

The track deteriorated something horrendous, but Billy really liked four-wheeling and got us far into the dunes. That is where it happened. We bogged seriously. Cruiser was in so deep she could not make another inch forward or backward no matter how many times we jacked her up and put boards beneath her wheels.

"Well, lets just camp right here, Bobby. You wanted dunes, you got em big time now."

"Billy we could die here. There is no track at all. There is nobody for hundreds of miles in any direction and nobody knows we are here. We have only a third of a jerry can of water, a half jar of peanut butter, and a few crackers, that is all. I don't think you're gunna find any rabbits to hunt in this sand."

"Well, Bobby, we could try to walk out of here."

"I don't think that is such a good idea. Our chances of survival are best if we stay with Cruiser where we got some water and can rig the shade canopy and where an airplane might spot us."

"Billy, I am frightened. I think we are gunna die right here."

"Bobby, you need to learn to control your emotions. We will either live or die, and your falling to pieces will not fix anything. You love the desert and you can die happy in the dunes with me."

And Billy bro gave me a hug I will never forget.

After we had rested under the canopy for a while I recovered enough to think about looking for herps. But we searched day and night and we found none on this dune; I mean to tell you, absolutely none.

"Billy I can see some vegetation over on that dune. Let's walk over there and see if there are any lizards."

And we found that the other dune had spinifex grass and each ring had several *Ctenotus* of different species. And our night walks revealed *Nephrurus vertebralis* emanating from the clumps.

"Billy, I am gunna die happy. As you say I got you, and I got the dunes, and now I got a hypothesis for the origins of this species rich herpetofauna. And, what's more, it is testable.

"Jarran and his social skink colonies taught me the importance of fragmented distributions in evolution. Now I see that fragmentation is the key to understanding the origins of the high species-richness of the Australian deserts. Each spinifex ring serves as a hub for a population that is more or less isolated by expanses of sand that are not inhabitable. These little populations are inbred and subjected to genetic drift.

"As climate became more arid and the sand expanded, the clumps receded and became more and more isolated. During wetter periods the clumps re-joined. Its like a miniature system of allopatry followed by sympatry that yields genetic divergence and species formation.

"Consistent with this hypothesis, species richness is greatest in the desert, and greatest among striped *Ctenotus* adapted to the spinifex. And we can further test this hypothesis by examining genetic structuring of lizards among spinifex rings in areas with differing degrees of aridity."

"Bobby, you're a genius. This is the role you were born to play."

"And I hope you will always play it with me."

I gave bro a hug and did not let go for a good long while.



***Nephurus vertebralis* by Stuart Nielsen**



***Nephurus vertebralis* by Frank Descandol and Philippe Sabine**



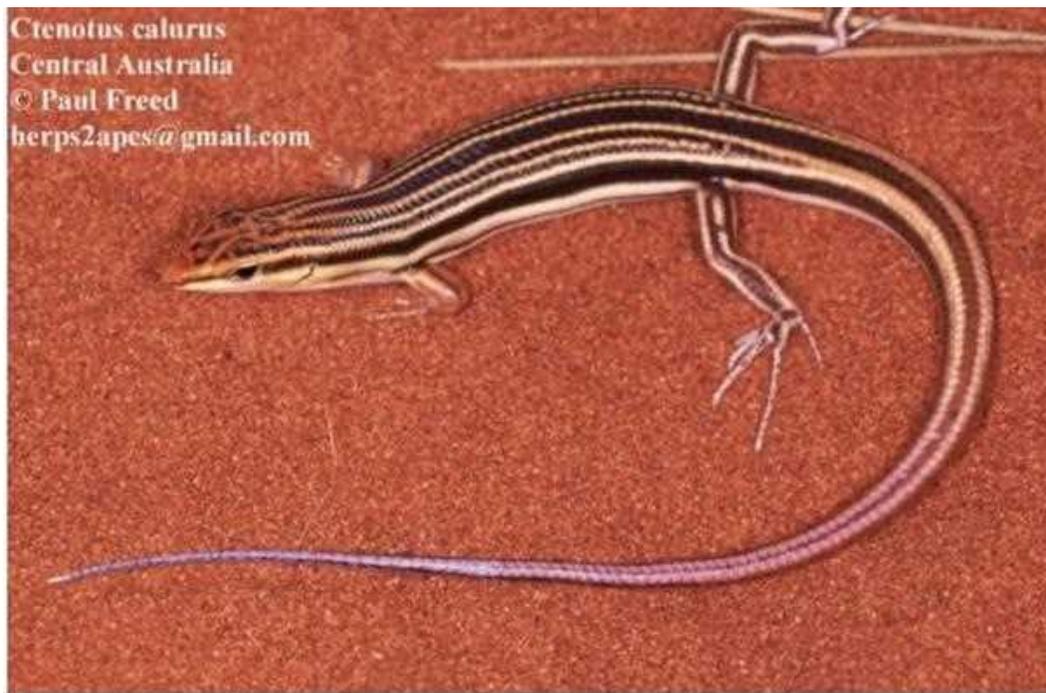
***Nephurus vertebralis* by Ed Galoyan**





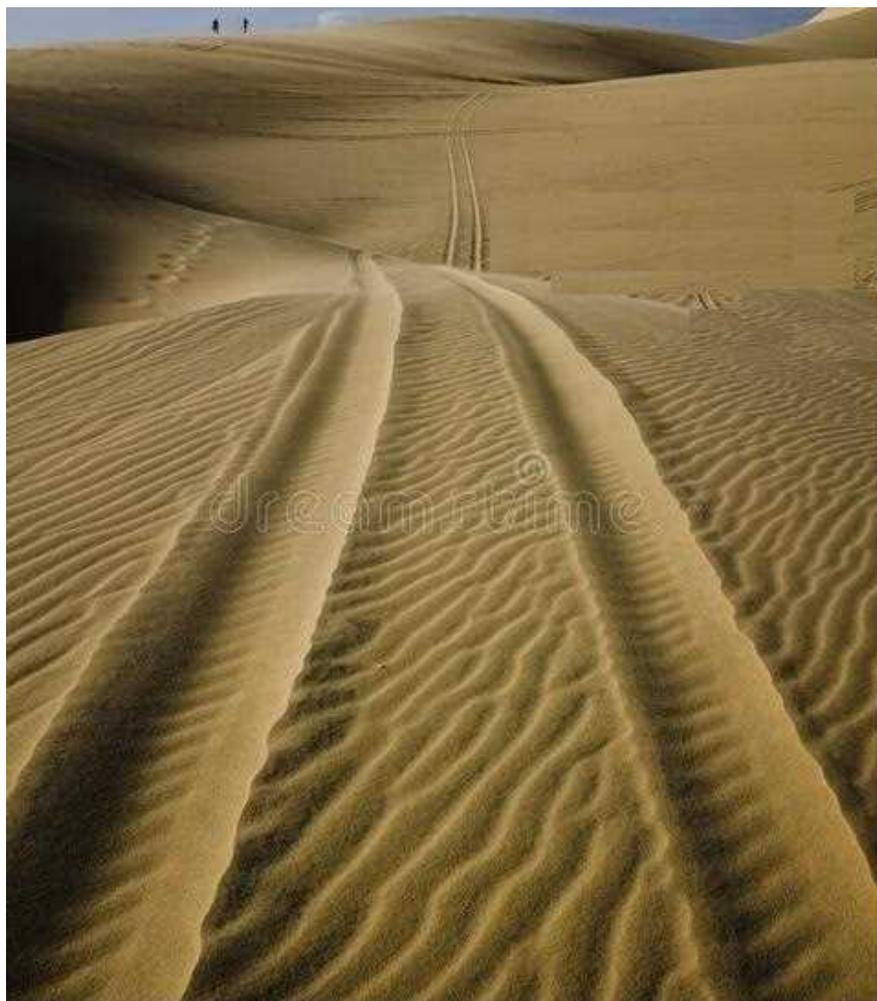
***Ctenotus piankai*** by Stewart Macdonald





***Ctenotus clarus* by Paul Freed**









## **28. *Varanus panoptes* (Yellow-spotted Monitors).**

Cruiser was totally bogged in the sand. The water can had been drained days ago, and Bro and I lay in the shade of our canopy awaiting death. We lost track of time, our eyes no longer focused, and we drifted in and out of consciousness.

"Bobby, I hear a voice."

"It's just dehydration delirium, bro."

Then I felt something wet pressed on my lips and a voice said, "Drink slow."

Billy and I slowly drank from Elder's kangaroo hide water bag and started to recover. When we got our strength back Elder managed to convey that his people could get Cruiser out the dunes. I got in and gunned it in reverse while all six clan members pushed. They were incredibly strong and got our vehicle all the way back to tierra firma.

Elder accepted a hug from me but nothing more. He conveyed that they were on a walkabout and that it would end in a corroboree in a few days. He invited us to come and participate in the celebration. There were no roads to the site but his son David could stay with us at the Cruiser and lead us to the corroboree when the time came. He said we would be the only white fellers there.

I was a bit hesitant but Billy, of course, immediately accepted. David was happy to stay with us after the others walked off. He spoke a little English and said he hunted very large goannas. From his description we suspected that the large monitors were something other than Perenties.

David took us on a walkabout away from the dunes and we were thrilled to discover the large goannas were actually *Varanus panoptes*. At our request he did not kill the goannas and we enjoyed watching and photographing these very large reptiles. Afterwards he and Billy got six rabbits and a hand full of Witchetty grubs. We were absolutely starved and wolfed the meat down like it was the last food on earth.



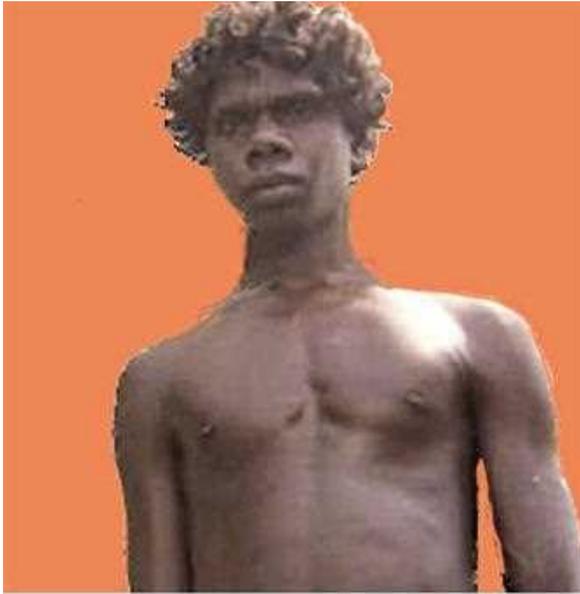
***Varanus panoptes* by Donald Hobern**



**Billy with *Varanus panoptes***



***Varanus panoptes* by Donald Hobern**



**David Gulpilil**



**Elder David Gulpilil**

**29. *Pseudechis australis* (King Brown Snake).**

David has enormous charisma and I became quite fond of him. It's strange how personal magnetism can reach across huge cultural divides and grab me. He started body painting for the corroboree and I enjoyed helping apply the paint. Bro played the yidaki while David danced for us, and his rhythmic movements were absolutely mesmerizing. I was starting to get excited about attending a corroboree where we would be the only "white fellers."

We abandoned Cruiser and headed out with David. It was definitely a walkabout and we just slowly meandered.

"How long will it take to get there?" I asked

"A little long while."

"How far is it?"

"A little long way."

This attitude began seeping into my spirit. These indigenous people have been wandering the desert for over fifty thousand years and know how to survive by not stressing over time or distance. No worries, no hurries is their key to survival and happiness.

David motioned for us to come look at something in a spinifex clump. We were surprised to see a *Pseudechis australis* coiled in the center. And I was pleased that bro did not insist on catching the deadly serpent by the tail way out here.

"The nuclear and mitochondrial gene sequences indicate there are 10 species in the genus *Pseudechis* and that *P. australis* may have undergone rapid range expansion in the Pleistocene. I wonder if this may have led to the origin of the large number of colors present in the species."

Maddock, S. T., Childerstone, A., Fry, B. G., Williams, D. J., Barlow, A., & Wüster, W. (2017). Multi-locus phylogeny and species delimitation of Australo-Papuan blacksnakes (*Pseudechis* Wagler, 1830: Elapidae: Serpentes). *Molecular Phylogenetics and Evolution*, 107, 48-55.



***Pseudechis australis* by tropidechis**



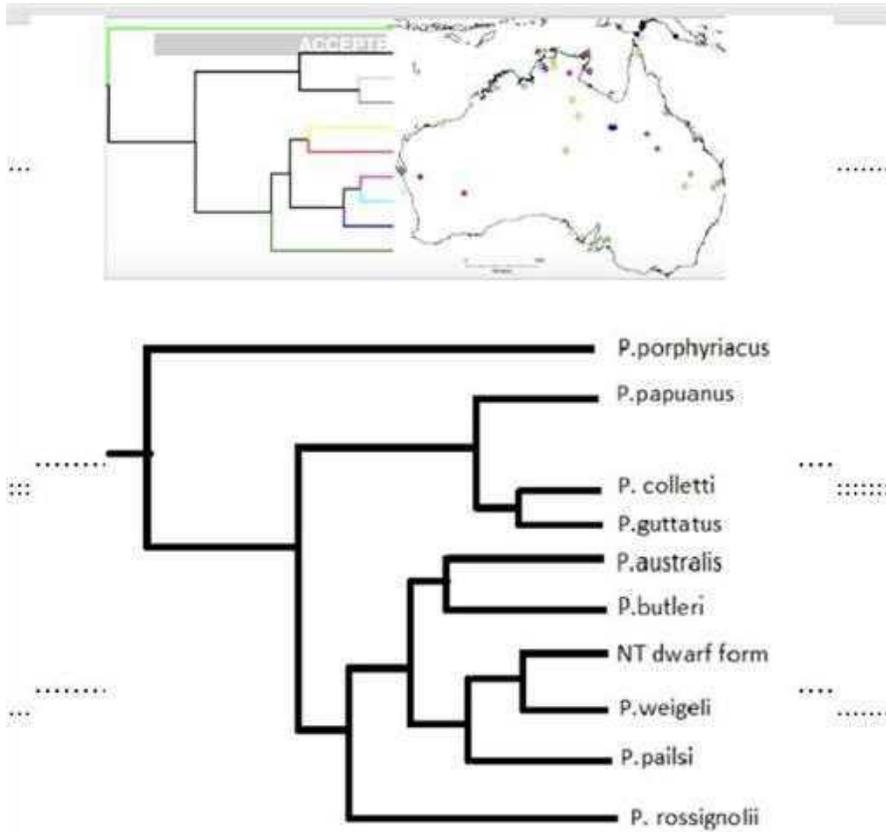
***Pseudechis australis* by Stephen Zozaya**



***Pseudechis australis* (modified from a photo by Brian Bush)**



**Color variation in *Pseudechis australis* by Brian Bush**



**From Maddock et al. (2017)**

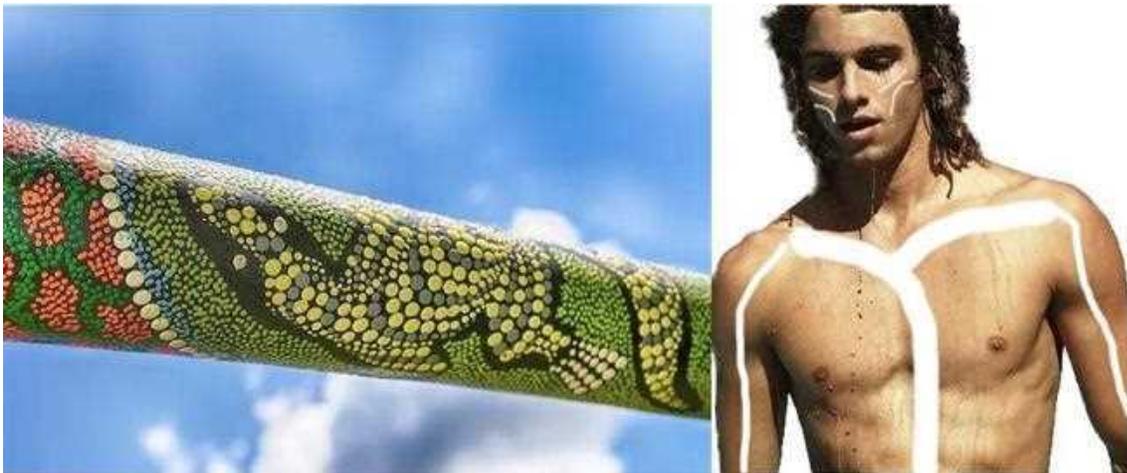
### 30. The Corroboree.

We arrived just as the celebration was commencing. Billy played the yidaki for David's performance and the people loved it. The entire corroboree experience was beyond description and Bro and I will always cherish the memory

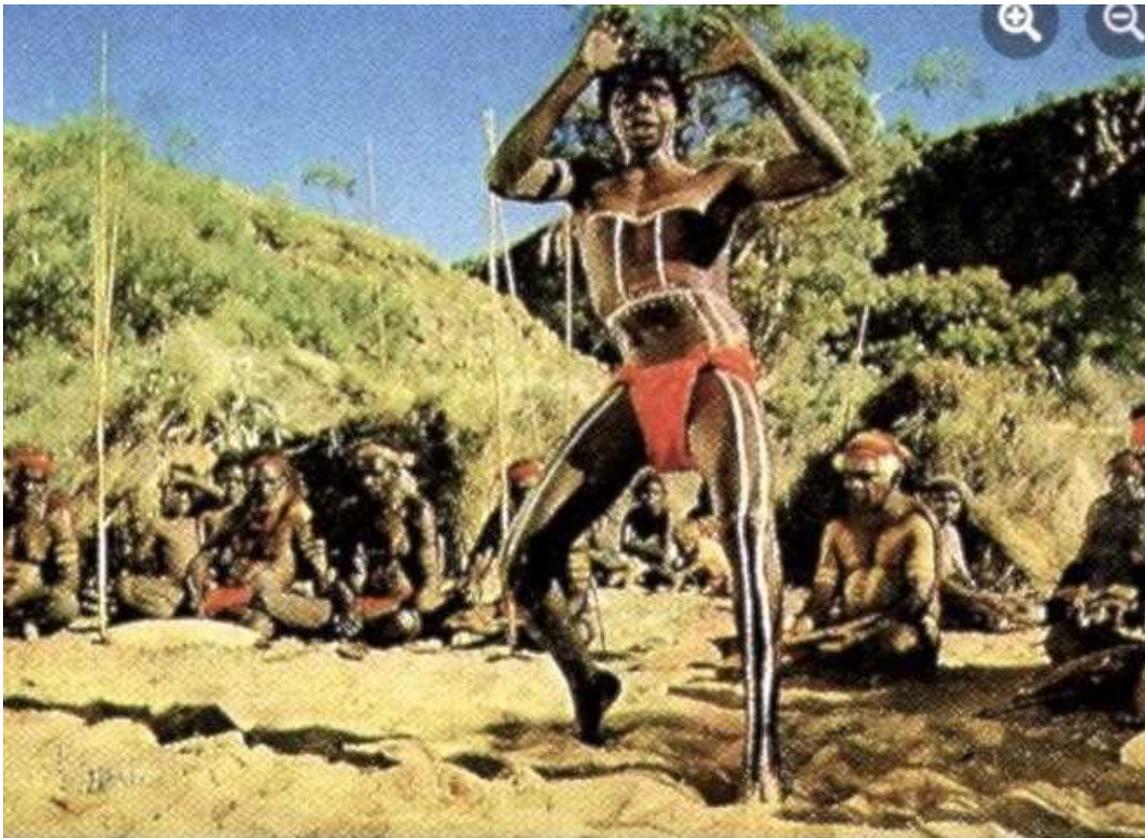


Storm Boy

## David Gulpilil



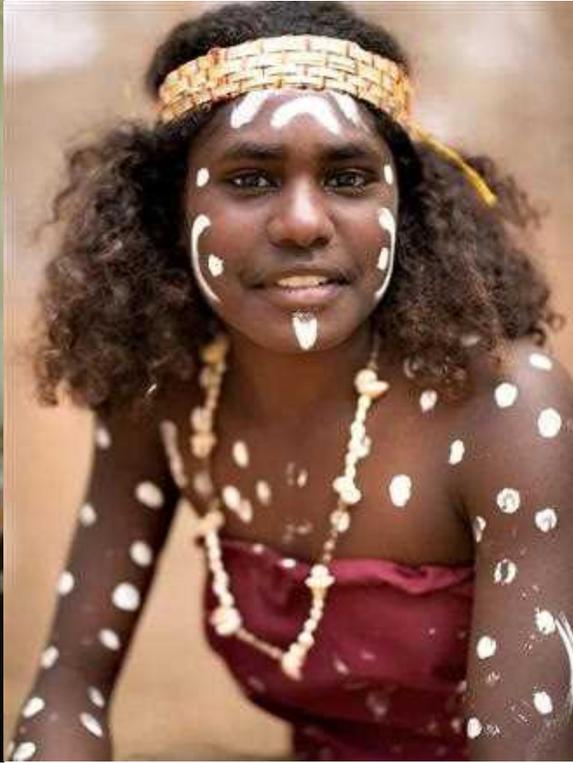
Billy and his yidaki



**David Gulpilil**











### 31. *Chelodina oblonga* (Oblong Turtles).

We left the corroboree, made the long trek back to Cruiser, and were off to explore westward. The transition from the Great Victoria Desert to the Western Woodland was surprisingly abrupt.

"Billy, I think this transition is more abrupt because the deserts differ more strongly from temperate woodlands than they do from tropical woodlands. Let's stop and savor this area for a while. Do you think you could find us a billabong?"

"Bro, there you go baiting me again, and with all you practice you are a master. "

"Practice makes perfect." And we both laughed our heads off.

Bro drove to several billabongs eventually found he found one that was truly tropical and was large enough for serious swimming. We dove in. After returning

from his long swim Billy announced, "I saw a side-necked turtle but couldn't catch it. I am gunna put on my mask and make another try."

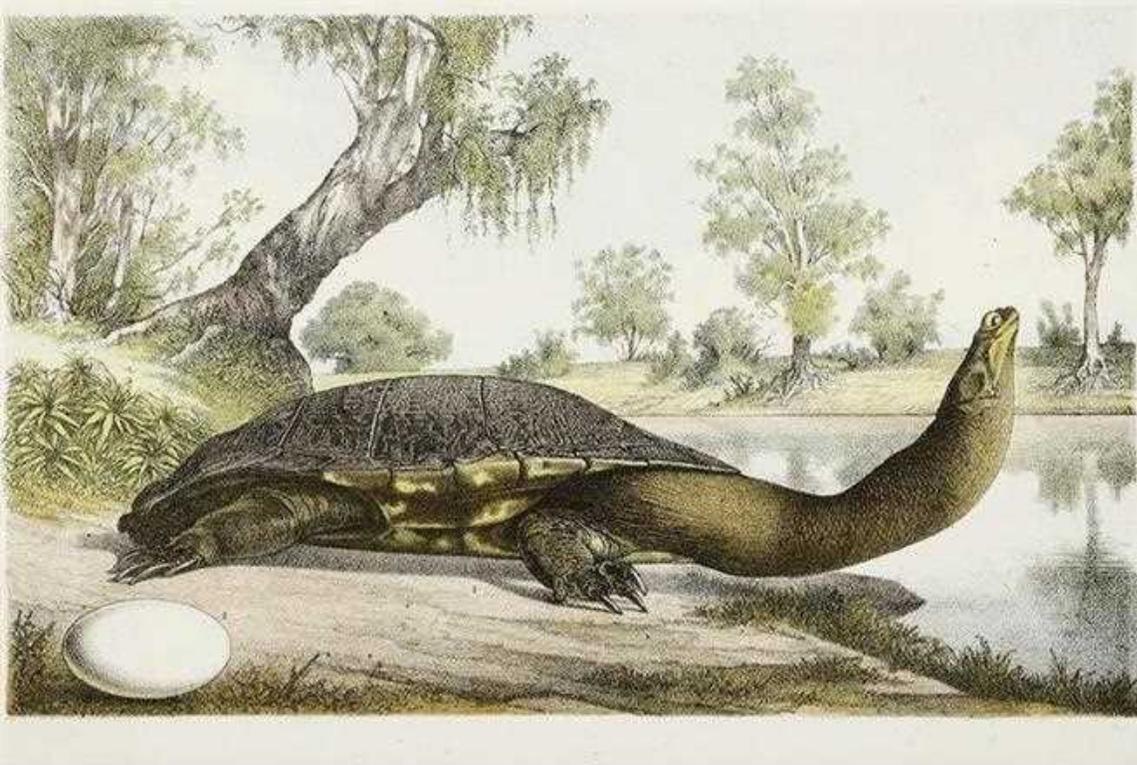
He returned with a big smile and a magnificent *Chelodina oblonga*.

"Wow, Billybro this exciting. It is a member of the Chelidae, Austro-American Side-necked Turtles that live today only in Australia and South America. These continents remained joined by Antarctica after Gondwanaland split up. The scientific names of some of the species of the Australia Side-necks have only recently been resolved by getting mitochondrial DNA sequences from the original type specimens preserved in museum collections."

Kehlmaier, C., Zhang, X., Georges, A., Campbell, P. D., Thomson, S., & Fritz, U. (2019). Mitogenomics of historical type specimens of Australasian turtles: clarification of taxonomic confusion and old mitochondrial introgression. *Scientific reports*, 9(1), 1-12.



***Chelodina oblonga* by Chris Mattison**



***Chelodina longicollis* by John James Wild**



***Chelodina oblonga* by wrangle**



***Chelodina oblonga* by Michael Willis**







## Austro-American Side-necked Turtles

■ Schlangenhals Schildkröten ■ Australsk-amerikanske Halsvendere



**Contents:** (as of 31st December, 2022)

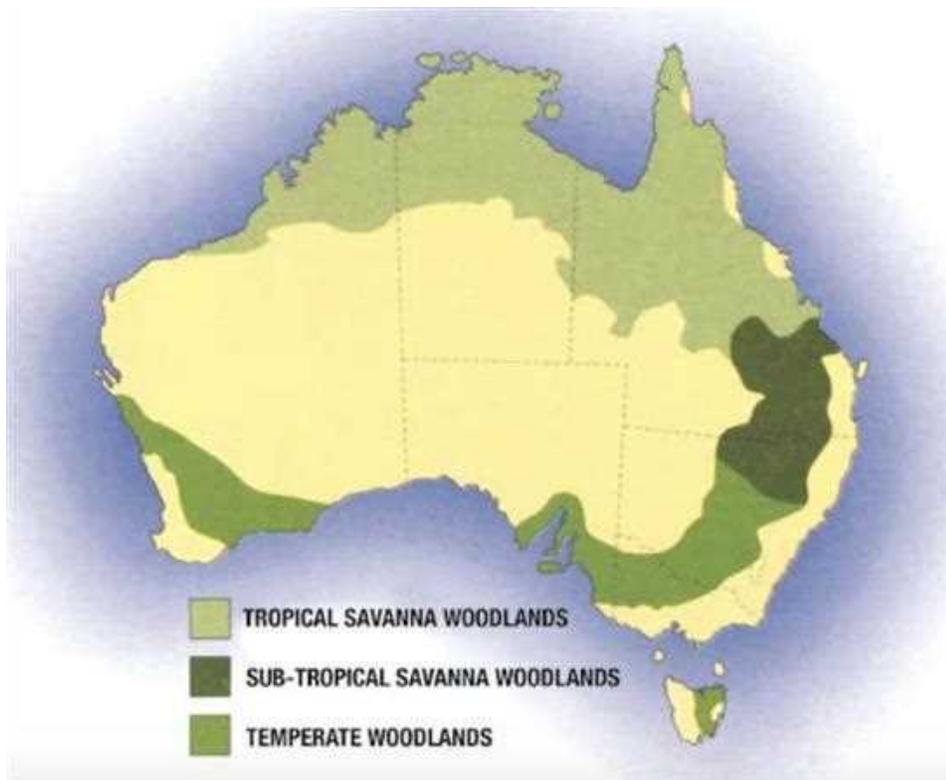
15 genera of which 5 (33.3%) are endemic

69 species of which 48 (69.6%) are endemic

**Endemicity:**

0% 100%

0% 100%





### **32. Surf's up.**

We reached the coast of the Indian Ocean and Billy wanted to go surfing. I am not fond of these physical adventures, but I know how much they mean to bro and so we hunted up a surfer camp. The waves were not great but the surfers were memorable, the human body in motion. Billy demonstrated his moves on the board and everyone liked looking at him. Ama and Ava invited us to spend the night having fun with them and their friends. We frolicked in the moonlight all night and fun was had by all. We got up at dawn before they did and silently escaped up the coast.

We stopped and had a long bro talk overlooking the sea.

"Billy, I am still having difficulty accepting these surfer frolics that you are so addicted to. I try not to be jealous, or feel hurt, but it is difficult."

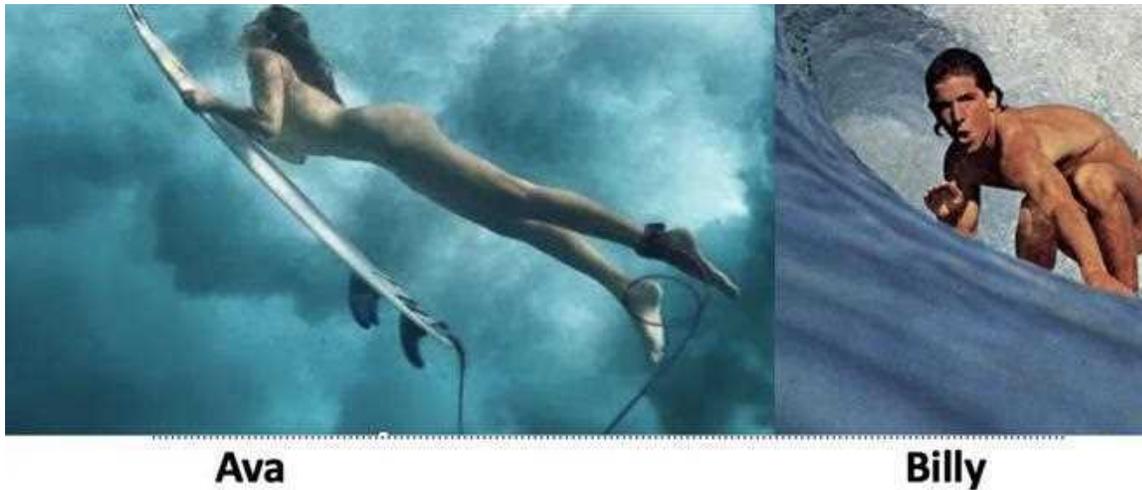
"I know this is all painful for you, and I love you for putting up with my addiction. As I said last time, sex and love are not very connected for me."

"I understand and accept that, and I hope you will accept that I do have a strong need to link the two. The degree of the love-sex connection is dimorphic in the human species. Males have it less in order to disseminate their genes more widely."

Females have a stronger connection to help assure that males will take care of them and contribute to the survival of their offspring. Even knowing all that, I am not fond of these frolics you are addicted to."

"Yes, I can see that clearly and will try to overcome my addiction to them because I love you."

And we hugged a good long while.



### 34. *Pseudonaja affinis* (Dugite).

The track brought us back to the coast and I could see that Billy was eyeing the waves to determine if they were any better for surfing at this stretch of beach.

"Billybro, are you wanting to go to go surfing again?"

"Well, yes Bobby I am. But I have overcome my addiction to frolicking with the surfers. I will find us a secluded beach and I will put on a surfing show just for you."

"Gee, Billybro, that would really make me happy. I love to look at you while you are surfing."

After he came in, Billy sat with his arm around me for a good long time. Just then two people walked up. When Oliver and Olivia heard we were were looking for reptiles, they announced they were studying sea turtles.

"This is one of the best places in the world for marine turtles. Six of the seven living species occur here and both the Green Sea Turtle and the Leatherback nest

on these beaches. We are working with Doctor Liz Sincere in Perth using molecular data to look at divergence among the various sea turtle nesting groups sometimes called arribadas in Costa Rica. Would you like to see the turtles? " Olivia asked.

Billy jumped right in. "Would we ever."

That was the start of a delightful five-days with Olivia, Oliver, and the sea turtles. At night we watched the two species nesting. During the days we accompanied our new friends in their panga to "hot spots" and snorkeled to see the other four species.

Billy and Oliver went spear fishing and we feasted on Barramundi and lobster. Oliver was interested in snakes and offered to take us out to Rottnest Island to see the endemic subspecies, *Pseudonaja affinis exilis*. Billy immediately snapped up the opportunity.

Oliver was an ace herper and soon showed us five dugites. He was an inveterate tail grabber and taught Billy how to do the maneuver with minimal risk of being bitten by the dangerous elapid.

The *Setonix brachyurus* (Quokkas) marsupials were abundant on the island and we were delighted to meet Doctor Liz Sincere studying their molecular genetics. I became infatuated with a mother Quokkas and her baby and wanted to keep them as pets. Fortunately Billy was able to talk me into letting them go free.

Lohmann, K. J., & Lohmann, C. M. (2019). There and back again: natal homing by magnetic navigation in sea turtles and salmon. *Journal of Experimental Biology*, 222(Suppl\_1), jeb184077.

Sinclair, E. A. (1998). *Genetic Variation in Two Endangered Marsupials, the Quokka, Setonix Brachyurus and Gilbert's Potoroo, Potorous Gilbertii* (Doctoral dissertation, University of Western Australia).

Sinclair, E. A., & Hyder, B. M. (2009). Surviving quokka (*Setonix brachyurus*) population on the Swan Coastal Plain, Western Australia. *Australian Mammalogy*, 31(1), 67-69.

Sinclair, E. A., Costello, B., Courtenay, J. M., & Crandall, K. A. (2002). Detecting a genetic bottleneck in Gilbert's Potoroo (*Potorous gilbertii*)(Marsupialia: Potoroidae), inferred from microsatellite and mitochondrial DNA sequence data. *Conservation Genetics*, 3, 191-196.



*Dermochelys coriacea* (Leatherback Sea Turtle) by Tamar Eban





***Chelonia mydas* (Green Sea Turtle) by Roberto Costa Pinto**





*Lepidochelys olivacea* (Olive Ridley Sea Turtle) by Rhiev



*Eretmochelys imbricata* (Hawksbill Sea Turtle) by PSE Tortuga Carey



***Natator depressus* (Flatback Sea Turtle) by Doug Perrine**



***Caretta caretta* (Loggerhead Sea Turtle) by Richard Segal**



***Pseudonaja affinis* by Wes Reed**

©2022 John Fowler & R. Barnes



***Psuedonaja affinis* by John Fowler & R. Barnes**



**Olivia**



**Oliver**



**Bobby with mother and baby Quokkas**

### 35. The conclusion.

We said goodbye to Olivia and Oliver and headed south towards Perth and there, in the middle of the road, it was. I screamed, "Echidna," and bro slammed on the brakes.

"I can't believe my eyes. I have wanted all my life to see a *Tachyglossus acueatus* (Short-beaked Echidna), and here it is sundering across the road on the very last drive of our Oz adventure. That two species of egg-laying monotremes live here with all these marsupials is what make Oz so strange, the land that time forgot."

We spent a long time watching and photographing the the *Tachyglossus acueatus*

"Lets just do a bro sit and have lunch right here with this monotreme," I suggested.

We said goodbye to the Echidna and continued our drive south. Billy spotted a little pod of people in the woodland and stopped to see what was going on.

"What's happnen, mates," Billy inquired.

"Well we's just havin ourselves a little snake wranglin corroboree," Steve Irwin replied.

And they were all there, Steve Irwin, Robert Irwin, Ricky Mack, Andrew Ucles, Miller Wilson, Jack Randall, Brandon Walters, and Stevie Lucs, demonstrating their tail grabbing techniques. Billy joined in and was the star of the show, grabbing three deadly Dugites at once.

We drove on into Perth, sold Cruiser, and put the money into a trust fund for Elder and his clan. Tears were in my eyes as we boarded the plane to leave the incredible land of Oz.



***Tachyglossus aculeatus* by Kathryn Bolles**



***Tachyglossus aculeatus* by Kathryn Bolles**



**Steve Irwin**



**Ricky Mack**



**Robert Irwin**



**Andrew Ucles**



**Miller Wilson**



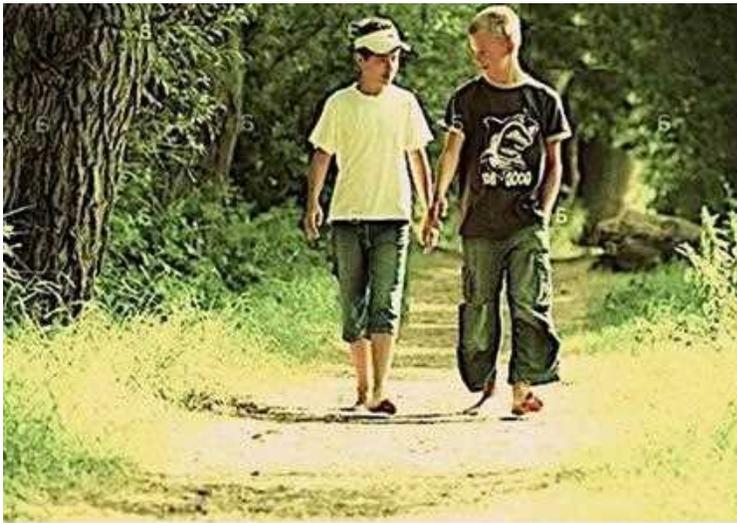
**Jack Randall**



**Stevie Lucas**



**Brandon Walters**



**Bobby and Billy**



**Bob Bezy and Kate Bolles by Kit Bezy**



**Kit Bolles Bezy with *Tachyglossus aculeatus* by Kathryn Bolles**



**Kit Bolles Bezy and Kathryn Bolles, Christmas Morning,  
Australia, 1993, by Robert Bezy**