

The saltwater crocodile; the largest of all living reptiles and one of the most dangerous



PNG CROCS ON THE CATWALK

Words & Photos: Gemma King



A new record was set in June this year when this crocodile skin Hermès bag – possibly made from PNG crocodile skin – sold at auction for US\$222,912



Luxury croc-skin bags like this one start from about US\$10,000

Did you know that the finest French handbags are made from Papua New Guinean crocodiles? We're talking about exquisite luxuriously-crafted designer handbags decorated with gold and diamonds with prices starting from a mere US\$10,000. In fact, a fuchsia-coloured croc-skin Hermès bag featuring a gold and diamond-encrusted clasp and padlock broke the record for the most expensive handbag ever sold at auction in Hong Kong in May this year, selling to an Asian bidder for US\$222,912! We can't confirm if this particular bag was made from PNG croc leather, but it's highly likely. Unfortunately, you won't get your hands on any of these luxury bags at the actual croc farm on the outskirts of Lae where the French buyers source their skins. But, as one of the largest commercial saltwater crocodile skin and meat producers in the southern hemisphere – and the only one of its kind left in PNG – the Mainland Crocodile Farm is an interesting place to visit nonetheless. Originally from Belgium, the farm's general manager Eric Langelet never imagined he would make a career out of the most dangerous crocodile species in the world.

As a tropical agriculture student in Belgium, Eric randomly chose crocodile farming as the subject of his thesis while completing a post-graduate Certificate in Tropical Animal Production and Health – confessing his motivation was to find an unusual subject unlike anything his fellow students were researching!

In the early 90s he came to PNG to volunteer as a high school teacher in the Southern Highlands and, after hearing about the Mainland Crocodile Farm, took a drive along the Markham Highway during the school holidays to check it out. The farm happened to be looking to hire a technical manager and, with his experience and genuine interest in crocodiles, Eric was a perfect fit. The stars were aligned and he left his volunteer teaching post immediately – and hasn't looked back.

That was 23 years ago, and in 2013 Eric cemented his status in the PNG crocodile industry by becoming the farm's general manager.

A bit of background about the industry in PNG:

As part of the PNG Department of



Farm general manager Eric Langelet shows how the crocodile skin becomes transparent under light so defects can be seen for grading

"...Three crocodile skins are needed to make just one handbag, meaning three perfect skins that are exactly the same shade of colour..."

Environment and Conservation's crocodile management program, a United Nations development program was set up in the late 70s to promote saltwater croc farming in villages in the remote coastal wetlands. The program sought to encourage the villagers to look after crocodiles in small mud pens until they reached commercial size, with an aim to provide them with a regular source of income while promoting sustainable farming. Unfortunately the project was unsuccessful.

Plan B saw the department approach the landowner group-owned Mainland Holdings Ltd with a proposal to set up a commercial croc-breeding farm next to its Lae-based poultry processing



Crocodile holding pens, Mainland Crocodile Farm



Younger crocodiles before being put in isolation to protect their skins from scratches and bites

plant operated by Niugini Tablebirds, using chicken waste as a food source for the crocs. The government allowed the company to buy live crocodiles from village people and, in 1980, the Mainland Crocodile Farm was officially born. In the early 80s, to ensure sustainable management of the croc population, and to comply with regulations of the Convention for the International Trade of Endangered Species, the department began annually surveying croc numbers in the Sepik River – one of the most densely-populated rivers in PNG and where a long tradition of crocodile hunting exists. Due to the Sepik's thick vegetation, finding crocodiles was problematic so a nesting index was developed: an annual recording of crocodile nests. All was going well until the destructive drought brought by the 1997 El Nino weather cycle resulted in villagers losing large amounts of their gardens and resorting to burning bushland to clear more land and start growing food again. Large areas of crocodile nesting habitat were burned in the process, and in 1998 the nesting index was devastatingly low. American crocodile scientist and conservationist Jack Cox, who instigated the survey and worked closely with the local communities, was heartbroken to see about 20 years of hard work

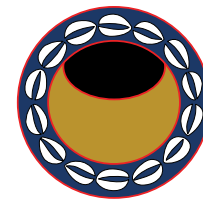
"...They had to get their canoe as close to the nest as possible before plunging towards it, sometimes sinking waist-deep in murky water, the whole time hoping the mother croc wasn't too close by!..."

literally go 'up in smoke.' Jack got to work immediately and set up a local community-based organisation called the Sepik Wetlands Management Initiative. He travelled along the river educating villagers on the importance of crocodiles as a commodity and how to protect them. As a major industry player, Mainland

Holdings joined the effort and promised to buy wild eggs from the region, but not without setting some strict conditions: there would be no more fires started in the bush, no more baited hooks near the nests, and a new limit on harvesting nests that ensured at least half of them remained untouched so wild eggs could hatch naturally and populate the lagoons. In 2001, Eric and his team made their first trip to the Sepik, patrolling the wetlands with villagers looking for nests. Not a job for the faint-hearted! In the Sepik, crocs don't make their nests on dry land but on floating mats of vegetation, so Eric and his team had to get their canoe as close to the nest as possible before plunging towards the mats, sometimes sinking waist-deep in murky water, the whole time hoping the mother croc wasn't too close by! The grass in the Sepik can have sharp edges too and coming home with a few cuts and scratches wasn't uncommon. They returned from the 2001 trip with 1500 eggs, after paying K3 per egg and exchanging two chicken eggs for each one. The saltwater croc egg harvesting season peaks in February when the nests are easier to access. It takes around two weeks of zigzag travel down the river in canoes, the landscape so vast and the vegetation so dense that often only four or five nests



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Eggs beginning to hatch in the farm's incubator



can be reached in one day. Handling the eggs takes a lot of care as the eggs are very fragile and the unhatched baby crocs inside can easily die. Since 2001 the farm has been training villagers in how to harvest and handle the eggs, which they now collect themselves and pack into cartons left along the river for collection a few days later by Eric's team. The eggs are carefully packed with the grass from the nest to prevent them from cracking or getting too hot or cold, before being flown to Lae. Every egg believed to be viable and strong enough to survive the journey is bought.

After the eggs are settled in the farm's

commercial incubator and the paperwork completed, the team then returns to the Sepik to pay the villagers.

Over the years, the price for wild eggs has increased dramatically, as has the number of eggs collected; last year 14,000 eggs were bought at K11 each, a big jump from 1500 eggs at K3 each in 2001. This year the price has increased further to K13 per egg in cash or K15 per egg for those villagers whose payment can be transferred directly into a bank account. Direct transfers reduce the security risk to the team members who have to travel the river carrying large sums of cash.

The extra K2 makes a big difference to

villagers and they are trying their best to set up bank accounts.

The 14,000 eggs bought this year were from about 90 individual suppliers. As is the way of life for many PNG communities, the profits are shared with the entire village despite only one person harvesting the eggs. Some villages pool the money to buy something big for the community such as a water tank. A couple of years ago one of the villages had enough money from selling crocodile eggs to send one of its young people to university.

The Sepik Wetlands Management Initiative is still going strong, with the team continuing to visit villages and educate on community development. The members are also on the ground to help Mainland Holdings with the logistics during a harvesting trip.

As well as harvesting wild eggs from the Sepik, the farm has its own breeding stock and eggs. The fertility rate of wild eggs is higher than that of farm-grown croc eggs but there is no research to determine why. Most of the wild eggs will be fertile, unless drowned or over-heated from the sun. Male crocs usually grow faster than females and the temperature during incubation determines the sex, allowing Eric and the team to manipulate the sex of their farm-grown crocs: temperatures of 30-32°C or 32.5- 34°C will mostly produce females, while

temperatures of 32-32.5°C will mostly produce males. The 'switch' in sex takes place around the third week. The farm eggs are harvested from the nests as soon as they are laid then placed in the incubators where the conditions are controlled for the entire 82-day incubation period. The temperature and humidity of eggs in the wild however cannot be controlled until the egg reaches the farm, which can be anything up to two months,

The farm buys more wild eggs than it produces farm eggs and relies heavily on its supply from the Sepik. No stock has yet been put aside for future breeders but this is the plan, to reduce dependency on wild Sepik eggs.

The farm is also exploring other possible harvesting areas in PNG. The Sepik is convenient because it's flat and easy to access, unlike the Gulf Province that is mainly made up of mangrove forest. There are plenty of crocs in the Gulf but finding the nests would be extremely difficult. There are also many saltwater crocs in other coastal provinces and in the islands of PNG but without an annual survey in these areas it would be hard to scientifically prove that commercial egg harvesting wasn't having a detrimental impact on croc numbers. Animal welfare organisations have in the past been negative about the industry and it's in Mainland Holdings' best interests to remain transparent about their close partnership with village suppliers. As well as buying wild eggs and salted wild crocodile skins, the farm buys small wild saltwater crocodiles from villagers. When Eric started in 1992 the farm was buying between 5000 and 10,000 live crocs a year, chartering a plane to pick them up in the Gulf Province (at Baimuru and Kikori), Western Province (Lake Murray) and East Sepik Province (Ambunti), but this is no longer economical. Now, villagers will either come to the farm or go to the nearest airport and put live crocs on a commercial plane.

My guided tour of the farm luckily coincided with the quarterly culling period (that's if you consider it lucky to see dead reptiles strung up!). The farm has its own certified abattoir for skin and meat preparation, a crocodile hospital and quarantine area, an incubator for hatching, 11 breeding pens, 78 hatching



tanks, over 100 growing pens, and more than 5000 individual fibreglass pens. Over the years, the farm has upgraded from earth ponds to concrete pens and now individual fibreglass pens – the first in the world to use individual pens, which help safeguard the croc (and its precious skin) from being damaged by other inmates.

"...Some villages pool the money from the sale of crocodile eggs to buy something big for the community such as a water tank..."

The facilities are extremely clean, the perfect backdrop for customers to inspect the animals. A trip to the hatching pen is a hot and sticky affair, so much so that I gave up trying to take a photo due to the humidity taking over my camera lens before I had time to take a decent shot! By code of best practice for animal welfare, an electric stunner is used to knock out the animals, after which they are killed by having their spines severed with a knife, then bled. I was happy not to witness this stage.

Skinning takes place in a well-chilled

room where a dozen tables are set up. Employees wearing overalls, gum boots, hairnets and disposable face masks take the freshly-bled crocodiles and, with very thin knives no bigger than a nail file, carefully cut away the highly sought-after skins. The back strap, used for making belts, is removed first and the remaining skin is cut away from the flesh in one large piece. The meat is a by-product that is in high demand locally as well as in Australia. The skinning staff are trained to take the utmost care to ensure the skins are not damaged in any way before soaking them in a tank of saturated brine solution, salting, pre-grading and storing them in a cold room for inspection by customers.

The quality of a crocodile skin is affected by defects such as bite marks, scratches, scars and, just like us humans, wrinkles (although I prefer not to think of my aging lines as a defect!). Skins used to be graded simply by the naked eye, a very straightforward process of looking for visible defects. But in 2009, a year after the global financial crisis, the market started demanding nothing less than perfection – not a single defect. Eric's quality control just got a whole lot more difficult! Customers started requesting that the skins be graded under a light table where old scars that you wouldn't otherwise see become visible. Scars aren't visible when the croc is alive, only after it has been skinned. Crocodiles are also very sensitive to stress – the more they are stressed the more likely they will stop growing and



Crocodile meat is in high demand locally and is also exported to Australia



The skin is very carefully removed from the body using a very thin, sharp knife

contract diseases. If there are more than three defects, the skins are considered no good for sale so it is in the farm's best interests to produce as many defect-free skins as possible. At time of writing, there were 38,000 crocodiles at the farm and 10,000 eggs in the hatchery, with 200 men and women employed to look after them plus a number of PNG uni students completing their industrial training. Some students have moved on to permanent positions. One, who now works for Eric as a full-time researcher, received a scholarship to New Zealand's Massey University after her training at the farm and went on to do her master's degree research on crocodile nutrition. In PNG there is no export quota for crocodile skins – farmed or wild. In fact, it is one of very few countries where people are still allowed to hunt crocs to export their skins. The only restriction is on size: skins

for export must have a belly width of between 18cm and 51cm. Anything smaller is not worth much and hunters would need to kill thousands of small crocodiles to earn a decent income, while the maximum is set to protect wild breeding stock. This doesn't mean that a large crocodile can't be killed if it is terrorising a village and threatening the lives of people and stock. The village can eat the meat, keep the skin for decoration and even make a necklace with the teeth – what they can't do is market any part of it. Mistakes are made, however, and people do try to sell oversized skins to the farm. These are confiscated and handed over to the wildlife ranger at the next inspection. The Lae farm has an excellent reputation internationally for producing the finest crocodile skins. Before 2013, Japan was the main market, but changes to the economy have since

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seen France take this position. Three crocodile skins are needed to make just one handbag, meaning three perfect skins that are exactly the same shade of colour. The market has a part to play in dictating quality and size, with the European market generally requiring larger skins than the Asian market. Because of their high value, the skins are individually inspected by the buyer before being packed and air-freighted to the respective tannery in France or Japan before being crafted into luxury goods such as handbags, purses and belts. Although they may not come with a Hermès, Louis Vuitton or Chanel label, the farm does stock a range of affordable croc leather products for sale, including belts, ladies' purses and key chains, ranging in price from K160 for a key fob to K520 for a gent's belt or K950 for a large ladies wallet. ▲

Gemma King



The skin is submerged in a salted solution for 24 hours before being dried, salted and graded

Visits to the Mainland Crocodile Farm on the Highlands Highway, Six Mile, Lae, can be arranged by appointment for Fridays and Mondays between 8am and 4pm. To arrange a visit, phone 472 1288, email crocfarm@mainland.com.pg or contact through the website: www.tablebirds.com.pg

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