



Photo: Maya Breeden

Stan and Kaisa Breeden have between them more than 65 years experience in nature photography, art, design, writing and film-making. Today they are at the forefront of digital close-up nature photography.

Stan is one of Australia's pioneering nature photographers and writers. He is the author of some twenty natural history books and has been published in the world's leading natural history magazines. He is an Emmy-award winning documentary film-maker and has also worked in India. After retiring from film photography, he embraced the digital realm with gusto.

Kaisa is a third generation artist/designer and comes from a background of bohemian art and design on both sides of her family. She has devoted the last ten years to digital photography and continues to experiment with new developments. Her aim is to produce photographs so detailed and clear you feel you could reach into them, as compelling as a 3D cinematic experience.

They live with their daughters in the rainforest of northeast Queensland, where they produce luminous books and fine art prints.

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There is nowhere on earth quite like Australia's southwest. One of only 39 biodiversity hotspots worldwide, it is characterised by a profusion of wildflowers so varied, so wondrous, that to encounter the area is to experience nature at its most extraordinary.

In this book Stan and Kaisa Breeden share that encounter in a combination of sophisticated technical skill, artistic vision and sheer patience. The images are as true to human perception as it is possible to be; they evoke the feeling of participating in nature rather than simply viewing it. They allow us to experience the phenomenon of biodiversity, its vibrancy and beauty, with unparalleled depth and clarity.

I am mesmerised by the Breedens' photograph of the kangaroo paw, Western Australia's floral emblem. The image is so evocative, so three-dimensional and real, that I am there ... hearing the brown honeyeaters and wattlebirds, smelling the eucalypts and boronias, breathing the crisp clean air of a Perth spring. This image is like no other published of the plant; an unheralded combination of artistic endeavour and technical mastery of twenty-first century digital photography.

Professor Stephen D. Hopper
Director, Royal Botanic Gardens, Kew



rainforest country
AN INTIMATE PORTRAIT OF AUSTRALIA'S TROPICAL RAINFOREST

KAISA and
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A quest to take the ultimate pictures of the ultimate wildflowers led Stan and Kaisa Breeden to the Southwest Botanical Province, a discrete area in the southwest corner of Australia that is home to 5800 kinds of plants. Their journey through this biodiversity hotspot took them from Shark Bay on the Indian Ocean to the Fitzgerald River on the southern coast.

Their photographs are a testament to the beauty and diversity of this region as well as their own artistic and technical skills. To photograph in the wild requires tremendous patience; weather and natural light cannot be controlled but must be accounted for. Then there are the limitations inherent in photography itself, which cannot capture more than one depth of field or cope with extreme contrasts between shadows and highlights in the way that the human eye can.

When working digitally, as the Breedens did, it is possible to capture a succession of images, identical except for their depth of field. These are then combined into a single photo that is in focus from front to back, resulting in an astonishingly three-dimensional image. The problem of contrast is equally resolved. The flowers on the page look so real that you are certain you can reach out and touch them.



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INTRODUCTION

I hear a faint 'crack'. A Cairns Birdwing butterfly splits its pupal case, ready to emerge. We raised it from a tiny caterpillar. The pupa, suspended from a branch, has been on my desk for a month. Finding purchase with its legs, the butterfly crawls out. The wings, still crumpled, are green, yellow, black. It is a male (see pages 170 and 171). Females are dark brown – almost black – and yellow (see pages 70–71). Slowly he pumps blood into his wings' veins. They expand to an enormous size, with a span larger than the palm of my hand. Australia's largest butterfly.

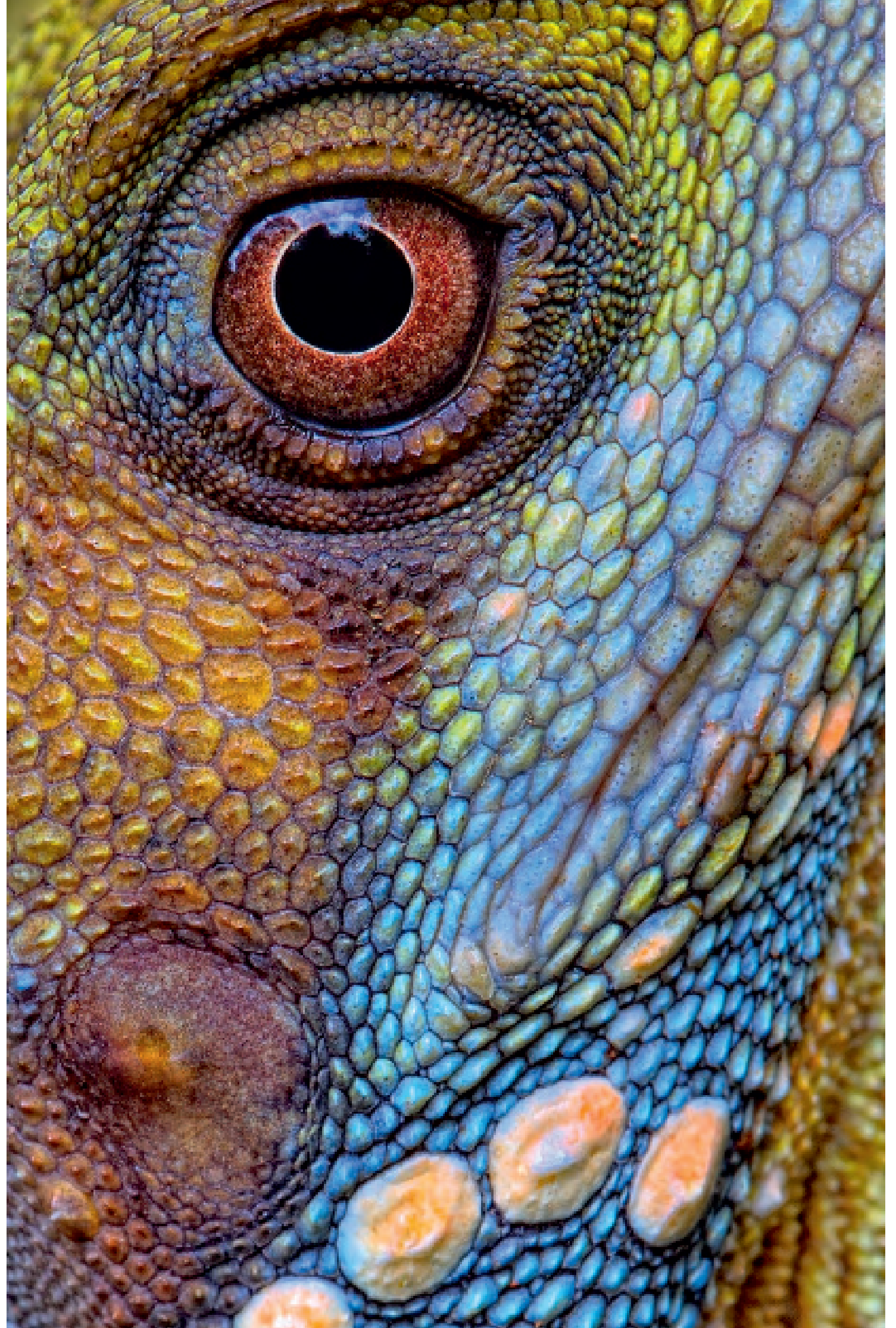
Outside, a soft, warm rain falls in the forest that surrounds our house. Should I walk out into it, I would feel it breathing, growing. Close by the window a mistletoe is densely covered in orange flowers (see page 208). Brown pigeons call in soothing voices, 'guguwunj, guguwunj.'

Several hours later the butterfly's wings are dry and strong. Carefully I coax him onto my hand and carry him to the open window. The rain has cleared. The forest still drips. A few experimental wingbeats and he takes off, past the mistletoe, banking around the clearing, over the crown of a Yellow Box laden with fruit. On he sails with infinite grace over the canopy and into the valley below our house that is still filled with mist.

While mist lingers in the valley, Mount Bartle Frere, which we can see from the other side of the house, is clear. The mountain, 1622 metres high, is the country's tallest peak outside the high country of the southeast. It is also the centrepiece of Australia's tropical rainforest (see pages 178–179). In partnership with the southeast trade winds, it creates much of our rain. Immediately to the east of the mountain is the Coral Sea, where the monsoon stirs up cyclones. Mountain, trade winds, sea and cyclones concoct our high rainfall – the highest on the continent – and sustains a great variety of life. Bartle Frere is the gatherer of rain and the keeper of the rainforest. For as long as there has been tropical rainforest in the world, it has been here on Mount Bartle Frere.

The mountain is only about 7 kilometres from our home. The dense forests that sweep down its slopes reach our place which we call Bulurru. The word means 'protective, benevolent forest spirit' in the local Aboriginal language.

Bulurru's 60 hectares, at an altitude of about 650 metres on the Atherton Tableland, are a wild configuration of ridges, ravines, forests, creeks, pools and waterfalls. All are clothed and overshadowed by hulking trees rising out of a sparse undergrowth and threaded through by vines. We are most fortunate to have such an enthralling place to call our own.







LEFT: Buttresses of the Rose Alder, *Caldcluvia australiensis*. Buttressed trees have no taproot. The elaborate outgrowths give them greater stability, especially in shallow soils.

FOLLOWING PAGES: Northern Barred Frogs, *Mixophyes schevilli*, emerge from the shelter of logs or thick leaf litter at night to hunt insects and other invertebrates. With the onset of the wet season they gather at pools in streams to breed. Males attract the females with resonant calls of 'whaap' and 'whaap-whaap'.









LEFT: Male Hercules Moth, *Coscinocera hercules*, about to fly off into the night. The male moths have elegantly tapered hind wings. The female's wings are larger, but not tapered. She is the largest moth in the world, with a wingspan of up to 27 centimetres.

FOLLOWING PAGES:
Brown Tree Snakes, *Boiga irregularis*, are night hunters who stalk sleeping birds, lizards and small mammals.

Chapter Nine

OUT OF AUSTRALIA - OUT OF ASIA

Stan

In 1840-1841 a 23 year old English botanist of slight build and unwavering determination spent 6 months collecting and studying plants in Tasmania. At the end of that time the young man, Joseph Dalton Hooker, thought he had a pretty good idea about the island's flora. He did not publish his *Flora Tasmaniae* until 20 years later. By that time he had become one of the most distinguished botanists of his age with a deep understanding of the world's plants and their patterns of distribution. He was Charles Darwin's confidant and closest friend.

In an introductory essay to *Flora Tasmaniae*, on the origins of Australia's plant communities, Hooker deduced that Australia's tropical rainforest was an invasion from southeast Asia - superimposed on the familiar woodlands. And that was how it was regarded for the next 100 years - an alien intrusion.

This perceived Asian invasion was thought of as somehow un-Australian. There were no gum trees in these rainforests, no scents of wattles, no hakeas, no bellbirds tinkling in the gullies, no koalas, no big kangaroos bounding through grass. Vines grabbed you with curved hooks. Giant black birds that could look you in the eye strode among densely packed trunks. Such kangaroos as there were looked strange and climbed trees. Fruits, colourful

and tempting, were poisonous. Chicken-sized ground birds called in strangling, gurgling voices. Constant humidity and heat were enervating. There was no understanding and as a consequence no affection for these mighty forests. They were plundered and cleared without thought and little curiosity.

Hooker, of course, wrote at a time before continental drift and its associated ideas about Gondwana were formulated and before the Australian tropical rainforests were studied in detail.

That study did not begin until the early 1960s when Len Webb and Geoff Tracey began their work at the CSIRO. They and others, especially those studying fossils from all parts of the continent, unravelled a very different story.

Tropical rainforests of flowering plants, and those of ferns, cycads and southern pines before them, have grown in Australia ever since these appeared on earth. Most of the time they covered the entire country, not just the northeast rim. Tropical rainforest was well established here 100 mya - long before they reached Southeast Asia in the northern hemisphere.

