S
omewhere between getting off the
plane and walking to the baggage
carousel at Sydney airport, Malcolm
Weatherup started feeling ill. First
a headache, then nausea. By the time
a friend arrived to take the seasoned
journalist for a nice long lunch, a fever was setting
in and he went to bed instead.

Eight hours later, as Weatherup writhed about with
a splitting headache, burning fever and outrageous
dreams waking him in fits and starts, the 63-yeas-old
started to wonder, “Don’t tell me this is it?”

“It really was that bad that first night,” he says as
we sit on his balcony back home in Townsville three
weeks later. It’s a top view out to The Strand and
Magnetic Island, but mates aren’t dropping around to
enjoy it with him lately. Not since he discovered the
reason he felt like death on January 9 was that he’d
contracted dengue fever - and the little mongrels
who gave it to him lurked somewhere in this unit.

A mosquito, an insignificant speck of wings and
membrane, a buzzing, biting blight on the wonder
of evolution, had made this 121kg man “as weak as
a kitten” with one suck of his blood. It was enough
to freak his friends out, and it had me worried, too.

Despite the mugginess of this summer afternoon, I’ve
entered the unit block wearing jeans with long socks
underneath, and a long-sleeved top. I’ve sprayed on
so much insect repellent, you’d think I had shares.

The reality is that this unit on Stanton Hill in the
inner-city suburb of North Ward is now probably
one of the unlikeliest places in Townsville to be
bitten by *aedes aegypti* (pictured), the largely indoor-
living “cockroach of the mosquito world” that carries
dengue. After his return from Sydney, within a half-
hour of Weatherup receiving test results from his
doctor that showed he had dengue fever type 1 (one
of four types), Queensland Health was on the phone
and organising to spray insecticide inside his unit.
Weatherup, who is not shy about taking swipes at
the health bureaucracy in his column in the
*Toww_-VIIe

Five weeks earlier and further north in Cairns,
Karen Thwaites had been just as surprised by the
arrival of spray-toting Queensland Health officers
at her door just an hour after she was diagnosed on
December 1 with dengue fever type 3. The week
before, the TAFE teacher had been struck down by
headaches that no amount of pills would shift; her
body ached like someone had smashed it with
a crowbar. Then came the raised red rash. “From
my neck to my toes,” says Thwaites, 50. “It was
horrid, it felt like things were crawling under my
skin. I’ve never felt that ill in all my life and you
really wonder if you’re ever going to get better.”

When her 18-year-old, gym-mad son Ben came
down with dengue the next week, Thwaites began to
appreciate Queensland Health’s urgency. Chats with
her North Cairns neighbours revealed that the man
next door had caught the fever about a week before
Thwaites, and one on the other side copped a dose
after her. What QH had been desperate to do was stop
it spreading beyond the suburb. But the department
was already behind the eight-ball. A nurse going door-
to-door discovered that a week or so before Thwaites
got sick, a North Cairns resident had returned from
Indonesia, where dengue is endemic. He had the
fever but managed it himself and did not see a doctor.
become endemic,” says the state’s chief health resources into managing this so that it doesn’t wrestle under control by September. Worst-case were infected. Best-case scenario is that it is believed to follow the return of a local from Vanuatu. That’s why we’re putting so many officers, Dr Jeannette Young. “Because if we didn’t, Queensland. “That’s why we’re putting so many

flaring up when an infected person brings it in from overseas, it becomes endemic, making catching it cannot be contained, so that instead of only outbreak of dengue fever in Australia since 1953-55, the virus. Then they bit a neighbour. Then the neighbour went about his business, going to work, perhaps to a Christmas barbecue in another suburb, where another bloodsucker bit him, incubated the virus and passed dengue fever on, and on … and another guy didn’t believe its … and another guy he says, “and one guy said, ‘Yeah, it can happen’, emailed some of the so-called experts in the field,” are yet to confirm any changes to the virus. “I’ve emailed some of the so-called experts in the field,” and as far south as Victoria in 1886. Today, the World Health Organisation estimates 2.5 billion people – or two-fifths of the global population – are at risk, with about 50 million victims per year.

Four different strains, or serotypes, of dengue fever now circulate the tropical world, all with similar symptoms. Some victims suffer no apparent illness, while others endure agonising muscle pain, excruciating headaches, fever and a vivid rash arriving towards the end of the typical seven-day cycle. There’s no cure, just advice to drink lots of water, take painkillers and lie low. Lethargy and minor aches can linger for a month. About 20 per cent of victims have been admitted to hospital in Queensland’s latest outbreak, mainly due to dehydration.

John McBride, an infectious diseases physician and clinical microbiologist at James Cook University, says there is no hard evidence one strain is nastier than another. The outbreak of dengue type 3 in Cairns has scientists scratching through the record books; strong anecdotal evidence suggests the virus may have mutated and is reproducing faster than ever. Scott Ritchie, the Queensland Health medical entomologist in charge of containing the outbreak, says the passage of the virus from mosquito to human normally takes two to three weeks. This time, it’s been clocked at nine days.

“We suggest that what’s happening in the mosquito – and the human, for that matter – is much quicker than normal,” Ritchie says. Laboratory tests are yet to confirm any changes to the virus. “I’ve emailed some of the so-called experts in the field,” he says, “and one guy said, ‘Yeah, it can happen’, another guy didn’t believe us … and another guy was, ‘Oh yeah, shit, it’s got profound implications.’”

SO SUDDEN, SO FRIGHTENING WAS THE ONSET OF the disease among the African people who suffered from it centuries ago, they thought it was brought by an evil spirit. Ka-diinga pepo, they called it in Swahili, and it’s believed that over time the words morphed into “dengue”. Later, Europeans named it like they felt it – breakbone fever.

The slave trade probably caused their agony. With shackled Africans carrying the virus, and the slave boats carrying water for mosquitoes to breed in, dengue survived the long passages to new worlds. The first properly documented cases of dengue fever occurred almost simultaneously in northern Africa, the United States, India and Indonesia in 1779-80. Today, the World Health Organisation estimates 2.5 billion people – or two-fifths of the global population – are at risk, with about 50 million victims per year.

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It’s not the first time the international community has been interested in dengue fever findings in Australia. Although its modern-day return to our shores was in Cairns in 1981 via an international traveller, dengue was first reported here in 1873, and as far south as Victoria in 1886. There have been about ten major epidemics of dengue between 1897...
and 2003-04, as far away as the Northern Territory and northern parts of Western Australia, as well as western NSW.

It was during a severe outbreak in Queensland in 1904-05 when Brisbane doctor Thomas Bancroft first showed that *aedes aegypti* was passing the virus on to humans. The British Medical Association reported at the time that 94 Brisbane people died from dengue in that outbreak, with more recent analysis suggesting the number could have been about 200 in south-east Queensland and northern NSW. Little about the disease was understood then, and it is likely these deaths were due to dengue haemorrhagic fever (DHF) – a more aggressive, potentially deadly form of the virus first described by another Queensland doctor.

Back in 1897, Dr F. E. Hare documented an epidemic in the Townsville/Charters Towers region in which 60 people, including 30 children, died. He noted that those who had been victims of previous outbreaks often became sicker than in the past, or died. It was a telling observation. What we now know is that if you’re infected with one of the four dengue serotypes, you are immune from that type for life. But if you contract one strain, then another in subsequent outbreaks, you are at risk of DHF.

“So we’ve certainly been spreading the word around the doctors that there could be cases of DHF during these epidemics and to look out for signs,” says McBride. At press time, Queensland Health claimed there were no cases of DHF in this outbreak. McBride learned some tough lessons from what happened in the Torres Strait.

But have we forgotten the lessons of the more distant past? The massive outbreak in Townsville in 1953-55 was the last in Australia for almost 30 years (until 1981-82, when 3000 cases were recorded in North Queensland), and it was an epidemic that south-east Queensland escaped. Why? Because *aedes aegypti* had left the region. It’s widely held that the bloodsucker disappeared largely because the new-fangled lawn mower was keeping yards tidier and rainwater tanks – perfect breeding grounds for the domestic mosquito – were being pulled down as piped water was introduced. Today, the *aegypti*’s territory cuts off its coastal advance around Gympie.

Now, though, because of the drought, the water tank is again proliferating in Brisbane back yards. Peter Ryan, the manager of the mosquito control laboratory at the Queensland Institute of Medical Research, says that while global warming markers such as higher temperatures and changes in rainfall may help increase the *aegypti*’s range, the potential for it to breed in improperly maintained tanks is of “much more significance”. Surveys by QIMR found no rainwater tanks in metropolitan Brisbane as early as 12 years ago, whereas last year roughly 50 per cent of homes surveyed had tanks and another 30 per cent kept water in other containers.

Ryan’s concerns are echoed by Stephen Prowse, the Brisbane-based chief executive of the Australian Biosecurity Co-operative Research Centre for Emerging Infectious Diseases, who adds that the sheer increase in numbers of residents and buildings gives the mosquito more scope to repopulate the south. “I don’t believe there’ve been good risk assessments done around the benefits of saving water compared with the potential cost of disease,” Prowse says. “There may have been; you’d have to talk to Queensland Health. If they were done, they weren’t publicised at all.”

So I ask Young, the chief health officer, if risk assessments were done. “Only in terms of we don’t have *aedes aegypti* in south-east Queensland,” she says. “Were it to come into south-east Queensland, then we would do a lot of work with people about managing the tanks so they make sure they stop mosquitoes getting into tanks.” Monitoring of the mosquitoes’ territory is done regularly.

Concerns about the spread of dengue fever do not stop with rainwater tanks, though. Another mosquito, *aedes albopictus*, is just as capable of transferring the virus to humans as its cousin. In fact, it can pass on the virus to humans as its cousin. In fact, it can pass on the virus to humans as its cousin. In fact, it can pass on the virus to humans as its cousin. In fact, it can pass on the virus to humans as its cousin. In fact, it can pass on the virus to humans as its cousin. In fact, it can pass on the virus to humans as its cousin. In fact, it can pass on the virus to humans as its cousin. In fact, it can pass on the virus to humans as its cousin. In fact, it can pass on the virus to humans as its cousin. In fact, it can pass on the virus to humans as its cousin. In fact, it can pass on the virus to humans as its cousin. In fact, it can pass on the virus to humans as its cousin. In fact, it can pass on the virus to humans as its cousin. In fact, it can pass on the virus to humans as its cousin. In fact, it can pass on the virus to humans as its cousin. In fact, it can pass on the virus to humans as its cousin. In fact, it can pass on the virus to humans as its cousin. In fact, it can pass on the virus to humans as its cousin. In fact, it can pass on the virus to humans as its cousin. In fact, it can pass on the virus to humans as its cousin. In fact, it can pass on the virus to humans as its cousin. In fact, it can pass on the virus to humans as its cousin. In fact, it can pass on the virus to humans as its cousin. In fact, it can pass on the virus to humans as its cousin. In fact, it can pass on the virus to humans as its cousin. In fact, it can pass on the virus to humans as its cousin. In fact, it can pass on the virus to humans as its cousin. In fact, it can pass on the virus to humans as its cousin. In fact, it can pass on the virus to humans as its cousin. In fact, it can pass on the virus to humans as its cousin. In fact, it can pass on the virus to humans as its cousin. In fact, it can pass on the virus to humans as its cousin. In fact, it can pass on the virus to humans as its cousin. In fact, it can pass on the virus to humans as its cousin. In fact, it can pass on the virus to humans as its cousin. In fact, it can pass on the virus to humans as its cousin. In fact, it can pass on the virus to humans as its cousin. In fact, it can pass on the virus to humans as its cousin. In fact, it can pass on the virus to humans as its cousin. In fact, it can pass on the v
McBride used to calm his callers by telling them that Australia hadn’t had a case of DHF in more than a century – but even before Kathleen Barry’s death (albeit not from DHF), that assurance had evaporated in 2004 with the deaths of a 40-year-old woman and a man, 70, from the Torres Strait islands. McBride says the significance of their symptoms was not recognised immediately by health workers who were dealing with a dengue fever epidemic. “It was only really in retrospect that the diagnosis was made. I think we

An epidemic of dengue fever is plaguing Queensland’s north – and is set to spread south. Why here, now, when we’ve learned so much from a century of deadly outbreaks?
importation of *albopictus* into mainland Australia should be given some priority," Ryan says, making the observation that the funds thrown at the horse 'flu epidemic were “oodles of magnitude higher” than that spent on *albopictus* control. “We are not quite sure whether it will spread throughout the major metropolitan areas of mainland Australia, but the modelling suggests it is more than likely that it will.”

If that occurs, “you’re just going to have to learn to live with it”, says entomologist Ritchie. And dengue would inevitably become endemic in great slabs of the country. Our love of travel would see to that. Remember how Weatherup popped off to Sydney for a few days, blissfully ignorant he had dengue fever? If *albopictus* were present and one bit him and contracted the virus, the cycle of infection could infiltrate a heavily populated area before authorities knew about it. The fever would have a life of its own. Not just residents in the Cairns international airport catchment would be at risk from travellers arriving with the fever pumping through their veins, but those in Brisbane, Sydney and even Melbourne.

Says Prowse: “We tend to think, ‘Oh, dengue, that’s an issue for south-east Asia.’ We need to change that. We don’t need to panic, but we need to be aware of some of these issues that relate to these diseases that are not going away. A more structured way of thinking about them is what’s required rather than casually dismissing them as not our problem.”

Being casually dismissed by public relations people is an occupational hazard for journalists – sort of like being swatted like a mosquito – but I’m still surprised by the response from the media section of the Australian Quarantine and Inspection Service to queries about *albopictus* control. Direct questions about which ports are monitored and fumigated is an occupational hazard for journalists – sort of the way of thinking about them is what’s required rather than casually dismissing them as not our problem.

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For the record, almost $6 million has been spent jointly by federal and Queensland governments over the past four years to attempt to eliminate *albopictus* from ten Torres Strait islands. The mosquito has persisted and operations are now concentrating on trying to keep it off the more populated – and more southerly – Thursday and Horn islands. No special meetings are planned to discuss future steps, with regular monitoring via the National Notifiable Diseases Surveillance System, while the National Arbovirus and Malaria Advisory Committee maintains “a watching brief”. And no, says the Commonwealth Department of Health and Ageing’s media department when I double-check AQIS’s response, dengue fever is not endemic in Australia.
conducted to see if those results translate to a more natural setting. “Rather than insecticide, where you have to apply it continuously at large expense,” says O’Neill, “the idea is we can release this bacterial agent into the population and it will … maintain itself in the population, so you have ongoing control.”

Then there’s the vaccine option. While hopes for one have been high for decades, William Ardrey, the chief executive of Brisbane-based biotechnology company Acuvax, believes he and his US-based partners are getting close. Ardrey expects clinical trials within six months, with Professor Ian Frazer, the champion of cervical cancer vaccine Gardasil, helping to negotiate the labyrinthine processes of the US Federal Drug Agency. Ardrey, who lives at riverside Bulimba in Brisbane’s inner east, is convinced that dengue is on its way to his suburb, more than 50 years since it disappeared from the region. “I’m working on a vaccine assuming that it’s going to be soon, and I’ll be one of the first customers.”

Mary Molloy will probably line up too, but in the meantime she’ll keep waging her own war on mosquitoes. “I’ll just grab the mosquito coil,” she says as we settle on her verandah in South Townsville. Inside, a QH pest controller is spraying her home. Molloy, her husband and two daughters contracted dengue fever type 2 in the 1992-93 outbreak, in which 900 Townsville and Charters Towers residents were infected. But once bitten, twice shy. “I’m very careful at emptying out palm leaves, and I do keep bird baths … but I empty them every day and they get scrubbed out once a week,” she says. She admits it wasn’t that way in the past. “Oh, I don’t doubt for a minute we had them breeding here back then – in those days, I was putting saucers under all the pot plants.”

Molloy says the spectre of contracting one of the other strains of dengue now circulating the north – or worse, dengue haemorrhagic fever – is enough to pull out all stops to keep the buzzing, disease-carrying bloodsuckers away. “I was bedridden, didn’t eat at all … I had the rash,” she says, her face crumpling at the memory. “And you hurt, you just hurt. You’d never want to