

# Entomology Before and After the Fall of Singapore: The Graham Howarth Collection

## Who was Graham Howarth?

Thomas Graham Howarth (1916–2015) was an English entomologist and a member of the Royal Army Medical Corps. Howarth arrived in Singapore in 1941 and after the Fall of Singapore spent three years as a prisoner of war (POW), first in Singapore and then in Korea.<sup>1</sup> He collected insects throughout this period.

Using cigarette tins, Howarth managed to preserve, smuggle and eventually bring home his collection of over 1,500 butterflies and moths, as well as about 100 other insects. Amongst these was a moth that was new to science and which he named *Apatele cerasi*. Howarth had bred the specimen from a larva found on a cherry tree in Korea. His entire collection is now at the Natural History Museum in London and is known as the Graham Howarth POW Collection<sup>2</sup>. This rich collection speaks of Howarth's tenacity in adversity while engaging in the quotidian as a survival strategy.

Howarth wrote of his experiences in an article entitled "Prison Camp Entomology in the Far East, 1941/45" that was published in the *Proceedings of the Transactions of the South London Entomological Society and Natural History Society* in 1951<sup>3</sup>. The information and excerpts below come from this article.

### Arrival

**29 November 1941**

Howarth arrives in Singapore and he describes it as an "entomological paradise".

### Tanglin

**10 December 1941**

Howarth settled in a camp in Tanglin, and began observing and collecting insects around him:

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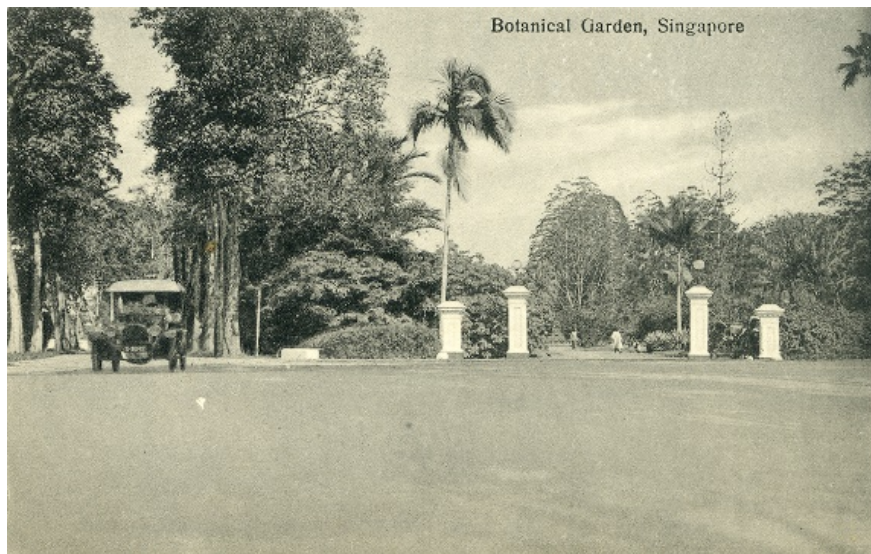
<sup>1</sup> <https://www.independent.co.uk/news/people/graham-howarth-entomologist-who-became-a-prisoner-of-the-japanese-but-was-able-to-build-a-large-collection-of-butterflies-and-moths-10265181.html>

<sup>2</sup> <https://www.nhm.ac.uk/natureplus/blogs/behind-the-scenes/2013/12.1.html>

<sup>3</sup> <https://www.biodiversitylibrary.org/page/29841567>

“I found it possible to collect near the camp most afternoons when I was not on duty, and my favourite locality was the edge of a patch of secondary growth adjoining a coconut plantation”

Howarth also mentioned that the best time to find an abundance of butterflies was at three o’ clock in the afternoon!



The Tanglin Gate at the Singapore Botanic Gardens, near where Howarth resided and in his own words collected “most afternoons when I was not on duty”. Source: *200: Points in Singapore Natural History*<sup>4</sup>

### **Collecting on Christmas Day 25 December 1941**

On his first and last Christmas Day spent in Singapore, Howarth was out in Tanglin collecting:

“On Christmas Day in a small clearing three or four yards square near Tanglin I took a short series of *Rapala jarbas jarbas*, which, according to Corbet and Pendlebury, is not plentiful in the southern part of the Malayan peninsula. When I first entered this clearing it seemed empty of life until suddenly there was a flash of red as some insect flew away, so quickly that the eye could scarcely follow. I remained motionless and the insect returned to the leaf which it had left, and after careful orientation slowly

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<sup>4</sup> <https://lkcnhm.nus.edu.sg/app/uploads/2020/06/200-e-book-Low-MEY-Pocklington-K-2019-200-Points-in-Singapore-s-Natural-History.pdf>

opened its wings. By cautious approach I managed to capture it and in half an hour I took another eight males and a female.”

This was also Howarth’s last day at the camp in Tanglin. The next day, Howarth moved to a new camp located along Reformatory Road (today known as Clementi Road), near the village of Bukit Timah. There, he undertook anti-malarial work around Kranji and Nee Soon, travelling by motorcycle from camp to camp, while learning about the prevention of mosquito breeding in those areas.



This common red flash (*Rapala iarbus*) was collected by Howarth from Tanglin on Christmas Day 1941.  
Source: SIGNIFY Specimen<sup>5</sup>

### **Bukit Timah 24 January 1942**

Howarth’s last collections before the Fall of Singapore were made in Bukit Timah. Unfortunately, his article does not describe his collecting in Bukit Timah. Thereafter, his collections were made as a prisoner of war.

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<sup>5</sup> SIGNIFY species page



This palmking (*Amathusia phidippus*) was collected by Howarth from Bukit Timah on 25 January 1942.  
Source: SIGNIFY Specimen<sup>6</sup>

### Fall of Singapore 15 February 1942

Howarth described the Fall of Singapore as the end of one war and the beginning of another:

“On the 15th February 1942 the war was over as far as I was concerned, but a new one, a much more insidious affair, was about to begin – a war against boredom, starvation, pestilence, and death.”

Howarth was first confined at the Raffles Library and Museum before being moved to Changi, where new opportunities for collecting insects presented themselves:

“I remained in the Raffles Library for three or four days after the capitulation, then had to move to the huge P.O.W. camp at Changi, situated on the eastern tip of the island. Here we finally settled down and I began to

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<sup>6</sup> SIGNIFY species page

collect once more. After a while I managed to get outside the perimeter several times a week on the pretext of helping the English Agricultural Officer who had permission to collect the natural food in the neighbourhood. This enabled me to explore and to collect whatever came my way.”



The Raffles Library and Museum where Howarth spent the first four days of his incarceration. The library is the building at the back that extends to the right of the photograph. Source: Royal Netherlands Institute of Southeast Asian and Caribbean Studies at Leiden<sup>7</sup>



The area outside the Changi prisoner of war camp. Howarth spent six months here before being moved to another camp in Korea. Source: Australian War Memorial<sup>8</sup>

<sup>7</sup> <http://hdl.handle.net/1887.1/item:854976>

<sup>8</sup> <https://www.awm.gov.au/collection/C983991>



## Hatching a Butterfly 10 March 1942

Howarth described how he found a pupa of a butterfly:

“On the 10th of March, I bred a male of *Arhopala zambra zambra* from a pupa I found on the upper surface of a leaf. A slight web of white silk was spun on the leaf and also over the pupa, which was itself attached to the silken mat by girdle and cremaster. Several ants were inside the web but I did not notice them until I had touched the leaf and disturbed them. Several authors state that the girdle may be the remains of a cocoon and I know of no other case where a pupa of a butterfly has all three methods of attachment.”

The butterfly emerged eight days later. Today, the empty pupa and a portion of the leaf it was found on, as well as the butterfly, are in Howarth’s collection.



This Zambra oakblue (*Arhopala zambra*) was collected as a pupa by Howarth from Changi on 2 March 1942. The adult emerged eight days later on 10 March. Source: SIGNIFY Specimen<sup>9</sup>

<sup>9</sup> SIGNIFY species page

## Leaving Singapore 16 August 1942

Howarth was in Changi for six months before being moved to Korea:

“On the 16th of August, just six months after capitulation, fifteen hundred of us left Changi and boarded a Japanese trooper, a converted cargo boat, the ‘Fukki Maru.’ We occupied the top section of the four holds, 375 men in each. We left Keppel Harbour on the morning of the 19th and sailed up the coast to Port St Jacques, which we reached on the 22nd. We left the next day and reached Takow, Formosa, on the 29th August, and began to unload our cargo of bauxite. ... After a two weeks’ stay we left for the last stage of this nightmare voyage, which proved to be the worst of all. We ran into the edge of a typhoon, dysentery and diphtheria broke out, and we finally came ashore at Fusan, Korea, feeling more dead than alive.”

### Epilogue: Recollections of Singapore

Howarth spent less than a year in Singapore but he remembered the island fondly:

“I found Singapore to be populated by some of those outstanding curiosities of nature which one hears about but seldom sees unless one goes to the tropics—house lizards that chirrup and run about quite happily over the walls and ceilings as if on the ground—flying lizards that swoop from the branches and land with a scrambling rustle on the trunks of the rubber trees—mud-skipper, those little fish that emerge from the water and clamber about the roots of the mangrove swamps—the insectivorous pitcher plant, *Nepenthes*, and the sensitive plant, *Mimosa pudica*. The latter never failed to impress me and I shall never forget the surprise I had on turning round while crossing a field for the first time and discovering that my tracks were as if scorched by an invisible fire—the dark green leaves of this little plant closing quickly and revealing its dark brown stems.”