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## THE TERNATE OF ALFRED RUSSEL WALLACE

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### Abstract

The island-city of Ternate, the original spice island of the Moluccas archipelago in today's Indonesia, has a special place in the life story of Alfred Russel Wallace. It was from here he sent out his two legendary scientific publications that established him as co-founder of the theory of evolution with Charles Darwin, and as father of biogeography. What was Ternate like in the second half of the 19<sup>th</sup> century? Where did Wallace reside during his time there? And what did his house look like? This report documents the results of our enquiry into these questions and proposes that his house be reconstructed and used as a local Alfred Russel Wallace and the Wallacea museum.

**Key words:** Science history, Indonesian archipelago, evolution, Wallace Line, Wallacea

### Introduction

Survival of the fittest as the basis of the evolution of life forms is perhaps the greatest scientific discovery of the 19<sup>th</sup> century. Alfred Russel Wallace wrote his essay that described his thoughts on the survival of the fittest as the basis of natural selection in the evolution of life forms in Ternate, not long after he first arrived there

early in January 1858 (Wallace, 1905). This Ternate paper (Wallace, 1858), *On the Tendency of Varieties to Depart Indefinitely from the Original Type*, read at the Linnean Society in London on 1<sup>st</sup> of July 1858, prompted Darwin to complete his better known book, *On the Origin of Species*, published the following year.

Alfred Russel Wallace's description of the imaginary line between the islands of Bali and Lombok and Kalimantan and Sulawesi, which separates two different faunas and floras as different as those of Europe and North America and those of South America and Africa, is similarly monumental in the history of biogeography. Although his thoughts on this were already taking shape earlier while in Lombok (Wallace, 1905), it was in Ternate that he put together the paper, *On the Zoological Geography of the Malay Archipelago*, describing his observations (Wallace, 1859). This seminal paper in biogeography was presented at the Linnean Society on the 3<sup>rd</sup> of November 1859. The region between this Wallace Line and Papua in the east, is known as Wallacea after his name, and is one of the world hotspots of biodiversity.

Wallace's house in Ternate, his base for three years, from his first arrival on the 8<sup>th</sup> of January 1858 to his last departure on New Year's Day of 1861, is an important monument of history. Wallace himself fondly recalled spending many happy days in the house. He wrote that returning to it after three or four months of expeditions exploring other islands of today's eastern Indonesia, "I enjoyed the unwonted luxuries of milk and fresh bread, and regular supplies of fish and eggs, meat and vegetables, which were often sorely needed to restore my health and energy." Further, "I had ample space and convenience for unpacking, sorting, and arranging my treasures, and I had delightful walks in the suburbs of the town ..." (Wallace, 1868).

The work described in this communication was conceived during a preliminary event to an International Symposium on Alfred Russel Wallace and The Wallacea in 2008. The Indonesian Academy of Sciences

(AIPI), together with The Wallacea Foundation (TWF), the Indonesian Institute of Sciences (LIPI) and the City of Ternate, organized the symposium to commemorate the 150<sup>th</sup> anniversary of Wallace's historic Ternate paper on evolution and to celebrate Indonesia's biodiversity (Holden, 2009). The International Symposium was held in Makassar from the 10<sup>th</sup> to the 13<sup>th</sup> of December 2008, but the pre-conference seminar, the preliminary event, was organized in Ternate ten days prior to the Symposium.

It was during the preparation of this pre-conference seminar that a remarkable story emerged from two Ternate medical doctors, Dr. Ahmad Nadjib Aziz and Dr. Mochtar Zein Pattiha. They believe a house in the Santiong area of Ternate is the site of the former residence of Alfred Russel Wallace. Dr. Ahmad Nadjib Aziz, in particular, who grew up in the very neighborhood of the house, recounted a story of how a Japanese engineer who lived in the house during the Japanese occupation of Indonesia in the second world war, told people that it was the residence of a famous British naturalist almost a century earlier. The old house is no longer there, replaced by a contemporary building. Following a quick assessment of its location and surrounding area, the City of Ternate announced the house in Santiong was the likely site of Wallace's house during his three years of residence in Ternate (Holden, 2009). We were most aware; however, that more solid evidence, assembled and documented in a completely independent way, was needed to support this position<sup>1</sup>, and immediately started the work reported in this communication.

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<sup>1</sup> This is important, as a house in the domain of the Sultan of Ternate, and belonging to the royal family, has for many years been celebrated as the former residence of Alfred Russel Wallace. The controversies are discussed in a later section of this communication.

We have since presented and discussed the progress of our work and findings in various lectures, seminars and symposia on Alfred Russel Wallace and the Wallacea. Here we present our story of Wallace's Ternate in a more formal way, as our contribution to the commemoration of the centenary of his death.

### **Ternate today and then**

We decided on a strategy that markedly differs from previous attempts to discover Wallace's Ternate house, which had relied mostly on finding an existing house that fits the description in his book, *The Malay Archipelago*, in the vicinity of an Old Portuguese (or Dutch) fort (Severin, 1997 and Wilson, 2000 for examples). Instead, we started our investigation with the assumption that, considering the rapid development of Ternate in the last four decades, the original house might not exist anymore. We reasoned that Wallace provided sufficient clues in *The Malay Archipelago* (Wallace, 1868) about the location of his Ternate house, that it should be possible to determine its location provided a period street-map of the old town of Ternate was available.

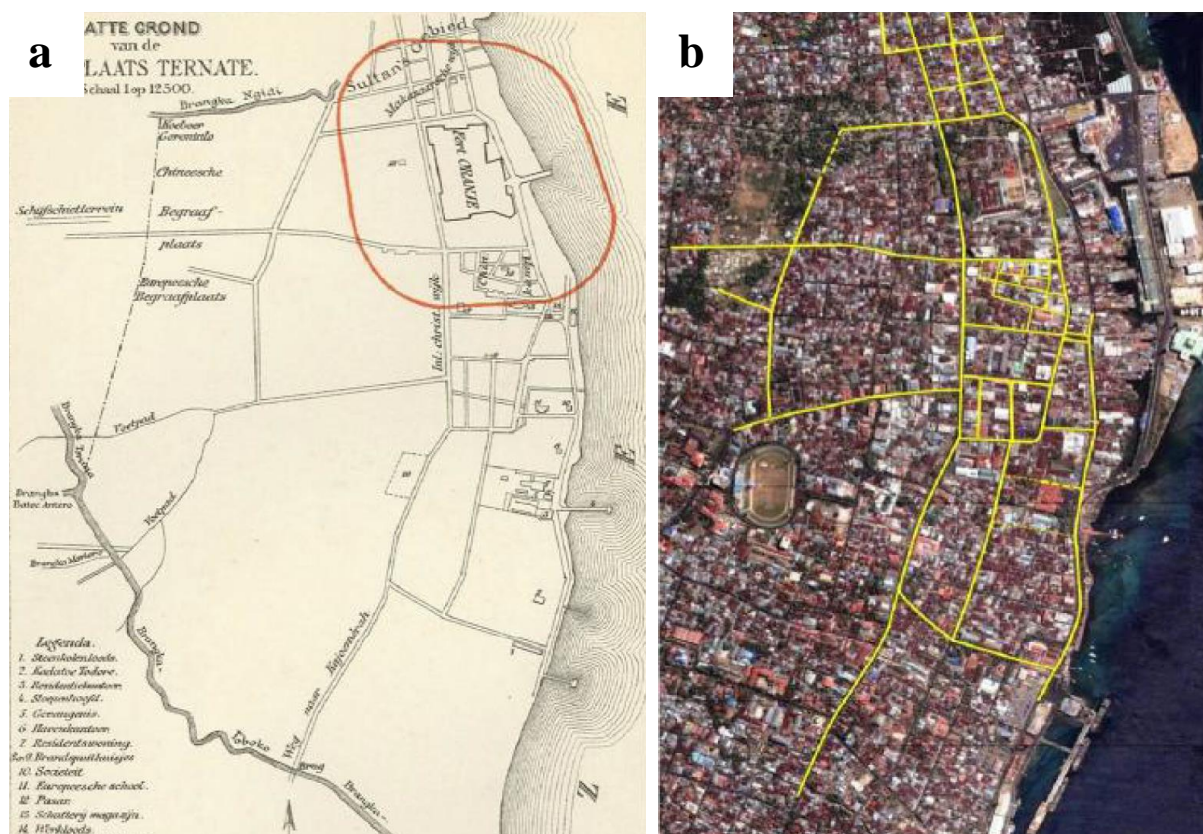
While our search for such a map had not been successful, an excellent street map of Ternate (Fig. 1a) could be found in a book by F.S.A. de Clercq published in 1890 (de Clercq, 1890). Although this book was published 30 years after Wallace left Ternate at the very end of 1860, we propose it is unlikely that the town had changed much during the interval. This notion is supported by de Clercq's own introductory statement that while "many generations of people have lived and died in Ternate, each leaving its mark to a greater or lesser extent on the small land, yet the region has been so little altered by its inhabitants that the description given by the earliest historians of the Dutch East Indies still applies almost completely to the present situation" (de Clercq, 1890). To our delight, despite the vast transformation of

Ternate in recent years, from a sleepy Dutch colonial regional administration town of the late 19<sup>th</sup> century to the major trading and contemporary capital city of the Indonesian Province of North Maluku, nearly all the roads and streets of the 1890's are clearly recognizable in the current map of Ternate (Fig. 1b).

This discovery was critical to our strategy, as a close survey of the very much expanded city, as outlined at the bottom of Figure 2, confirmed our notion that most of the old buildings have been demolished and replaced, particularly in the former Dutch section of the city, at the edge of which Wallace's house was located (Wallace, 1868). A typical example is the very center of the Dutch administration along the beach road in 1890 (Fig. 1a), shown in Figure 2a as it looked in 1880. While the pier across from the Residency office has been rebuilt following its collapse in 1963, none of the old buildings, including the Resident's house, remain in existence (Fig. 2b, c). Instead, they have been replaced by amongst others the two story office of the District Attorney and the large contemporary office of the Governor of North Maluku. In comparison, the Kedaton (Palace) of the Sultan of Ternate and the Makassarese quarter nearby, as well as Fort Oranje and the Chinese district, have been relatively well-conserved.

### **In Search of the Ternate House of Alfred Russel Wallace**

The Ternate of 1890 (de Clercq, 1890), as it was thirty years earlier (Wallace, 1868), was divided into distinct quarters. The center of the colonial administration consisted of three parallel roads (Fig. 1a), the longest of which ran along the beach where the office and residence of the Dutch Resident were to be found. At the north end of this road were the Chinese quarter and Fort Oranje, separating the Dutch administration town from the Makassarese district and the territory of the Sultan of Ternate.



**Figure 1:** Street map of Ternate. (a) In 1890 as found in *Bijdragen tot de kennis der Residentie Ternate* by F.S.A. de Clercq (de Clercq, 1890). (b) Google map of the city in 2015. Nearly all the roads and streets of 1890's are clearly recognizable in the current map of Ternate.

**Table 1:** Where was Wallace house in Ternate located? <sup>a</sup>TMA = The Malay Archipelago (Wallace, 1868); <sup>b</sup>The preferred walking speed of an adult is 5 km/hour (McNeill Alexander, 2002).

	Source	Reference <sup>a</sup>
Not in town but close to; free outlet to the country	I obtained a house, rather ruinous, but well adapted to my purpose, being close to the town, yet with a free outlet to the country	TMA p312
On a formal road	Wallace plan of the house shows a road right in front	TMA p313
About half a kilometer on the road from the market and the beach <sup>b</sup>	Five minute walk down the road brought me to the market and the beach	TMA p314
Toward the mountain; at the edge of the Dutch section of town	In the opposite direction there were no more European houses between me and the mountain	TMA p314
Had a deep well	A deep well supplied me with pure cold water—a great luxury in this climate	TMA p314
Landlord was Chinese	I went to the island of Gilolo, accompanied by two sons of Mr. Duivenboden, and by a young Chinaman, a brother of my landlord,	TMA p318
Near an old fort, but not in the Sultan's part of Ternate	Just below my house is the fort, built by the Portuguese, below which is an open space to the beach, and beyond this the native town extends for about a mile to the north-east.	TMA p314

As summarized in Table 1, Wallace wrote in *The Malay Archipelago* that his Ternate house was close to town with a free outlet to the country (Wallace, 1868). He obtained the house with the assistance of a Mr. Duivenboden, “a very rich man of an ancient Dutch Family, being owner of half of the town and possessing many ships and more than a hundred slaves”. The house was on a formal road, about a half an hour walk from the beach towards the mountain. The map of de Clercq (Fig. 1a) shows just two roads going from the Dutch town toward the mountain. Only one of these, however, fits Wallace’s description of having direct access to the beach. This road intersected the beach road between the Chinese quarter and Fort Oranje, leading west toward the mountain, in the direction of the ancient European and Chinese graveyards (Fig. 1a). Taking into account that the average walking speed of an adult is 5 km/hour (McNeill Alexander, 2002), the house should then be about half a kilometer from Ternate’s beach front in the 1890 map. In the city of Ternate today, this is at the road known as Jalan Nuri in 2008 (subsequently renamed Jalan Alfred Russel Wallace), in an area locally known as Santiong (Fig. 3a).

Wallace’s fond reference in *The Malay Archipelago* to a deep well that supplied him with pure cold water, which was “a great luxury in this climate”, provides the crucial information to locate more precisely the site of the house. One of us (SA) was born and raised in Santiong (literally means Chinese cemetery), a district at the edge of the old town of Ternate. His personal knowledge of more than 50 years in the Santiong area, independently confirmed through interviews with elderly individuals who also grew up in the locality (Fig. 2 bottom), pointed to the fact that until quite recently there were only two deep wells in the neighborhood, the only source of fresh water for the local inhabitants; a great luxury, indeed. The wells are at the back of houses that obviously had been built in

more recent times, the locations of which are indicated in Figure 3a. Both wells have been closed but one, at the back of an obviously rather modern looking albeit simple house (Fig. 3b), is still being used with the help of a water pump (Fig. 3c). This is indeed the house claimed by the Japanese engineer quoted earlier by Dr. Ahmad Nadjib Aziz to be the site of the house of “a famous British naturalist almost a century earlier”.

### **Reconstructing the Ternate House of Alfred Russel Wallace**

With the original house no longer there, a major question then is whether it is possible to reconstruct the house based on information available today. Wallace once again had provided quite extensive information (Wallace, 1868), including a plan of the forty square feet house, which consisted of four rooms, a hall, and two verandahs as shown in Table 2. As summarized in this Table, he described the house as being constructed following a very common mode of building in the islands at the time: “The walls are of stone up to three feet high; and on this are strong squared posts supporting the roof. Everywhere except in the veranda filled with the leaf-stems of the sago palm, fitted neatly in wooden framing. The ceilings are like the walls. The floor is of stucco.”

We searched the Santiong neighborhood and found three houses still showing this traditional way of building, on the same road and not far from the site of Wallace’s house deduced earlier. These houses had been there for at least 50 years (SA personal observation; supported by interviews with other local residents), but are probably much older. The front view and the thatched roof of two of these houses are shown as a composite in Figure 4a, and together they provide good details on how the walls, ceilings and floor of Wallace’s Ternate house were presumably constructed (Fig. 4b,c). An intact well (Fig. 4d), found near the ruin of a Dutch colonial

building in the old town adjacent to the Chinese quarter, completes the details required for the reconstruction of Wallace's Ternate house.

### **Concluding Remarks**

We believe that the facts outlined in this report have provided sufficiently strong evidence on the location of Alfred Russel Wallace's house in Ternate, placing it in the former Jalan Nuri, in the Santiong neighborhood on the western outskirts of the earlier Dutch town of Ternate. We are also reasonably confident that there were only two deep wells in the neighborhood, and thus the only two likely sites of the house. It is not possible for us, however, to determine with certainty which of the two sites is the right one.

Two arguments, nevertheless, suggest that the house was probably related to the deep well on the north side of the road. First, Wallace's description that just below his house was the fort<sup>2</sup>, below which was an open space to the beach, fits this site much better than the alternative, on the south side further to the west. Second, corroborating the above argument is the story that had started this investigation in the first place, conveyed by Dr. Ahmad Nadjib Aziz, whose large family has been living in a neighboring house for several generations. The story that a Japanese engineer lived during the Second World War in a house on the site of the well, and his claim that it is the former house of a famous British naturalist, lives in the collective memory of the family. The basis for this claim, however, is not clear and our attempt to trace the Japanese engineer has not been successful so far.

We hope that the evidence we present here will end the controversy related to another house that has been celebrated for many years as the residence of Alfred Russel Wallace during his time in Ternate (see Severin, 1997 and Wilson, 2000). The house is located in Jalan Sultan Babulla, close to the Kedaton (Palace) of the Sultan of Ternate, and used today by a relative of the Sultan and his family. Based on the claim by the Ternate royal family, that Wallace lived and worked in the house at the invitation of the Sultan at the time, the house had been completely restored from almost a ruin (Severin, 1997; Wilson, 2000). However, it is definitely not the house that Alfred Russel Wallace obtained with the help of Mr. Duivenboden, which was owned by a Chinese landlord (Wallace, 1868). Our inspection of the house showed that it is much bigger than the forty square feet described in *The Malay Archipelago* (Wallace, 1868). It is in the wrong location, being right in the center of the Sultan's quarter, instead of at the outskirts of the Dutch center of the old town, with a free outlet to the country toward the mountain (Table 1). Fort Oranje is nearby, but not below this house. De Clercq's map of 1890 (de Clercq, 1890) shows that it does not fit Wallace's description of "about half an hour walk from the beach toward the mountain". And, lastly, the house is far from simple; the row of eight masonry pillars supporting the roof of the front verandah would have been noted by Wallace, instead of the strong squared posts supporting the roof he described (Wallace, 1868).

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<sup>2</sup> Wallace described the fort as being built by the Portuguese, but while there are indeed many Portuguese-built forts on the island of Ternate, none is within or in the vicinity of the former Dutch town. He could have been mistaken, thinking that Fort Oranje, established by the VOC in 1607 on top of the Ternatean Fort Malay, was built by the Portuguese prior to the arrival of the Dutch. His description that the fort was just below his house, and that "below which was an open space to the beach" (Wallace, 1868) fits Fort Oranje perfectly.



**Figure 2:** Dutch colonial administration center of Ternate. (a) Resident's Pier, built in 1811, as seen in 1880 (University of Leiden, KITLV Digital Image Library). The pier had undergone several renovations and collapsed in 1963. (b) The Resident's Pier in 2009, following renovation in 1996 by the North Maluku Regency in partnership with PT Semana Graha Geovani. (c) View of Ternate from the pier. (d) One of us (SM), with de Clercq's map in hand, explaining our strategy to locate Wallace's Ternate house to Redmond O'Hanlon, British writer and scholar, during the production of a program on Alfred Russel Wallace by VPRO, 3–9 June 2009.

**Table 2:** What did Wallace's Ternate house look like? <sup>a</sup>TMA = The Malay Archipelago (Wallace, 1868).

	Source	Reference <sup>a</sup>
	Plan of the house is shown in TMA; the house is forty feet square, consists of four rooms, a hall, and two verandas.	TMA p313
	Followed common mode of building in the islands	TMA p314
	The walls are of stone up to three feet high; on this are strong squared posts supporting the roof.	TMA p314
	Everywhere except in the veranda filled with the leaf-stems of the sago palm, fitted neatly in wooden framing.	TMA p314
	The ceilings are like the walls.	TMA p314
	The floor is of stucco	TMA p314
	<i>The roof is of thatch:</i> I had just awoke at gun-fire (5 AM) when suddenly the thatch began to rustle and shake as if an army of cats were galloping over it,	TMA p317



**Figure 3:** Suggested location of Wallace's house. (a) Jalan Nuri (Nuri Road; renamed Jalan Alfred Russel Wallace), around 0.5 km from the beach front of 150 years ago. Interviews with elderly residents established that there were only two deep wells in the neighborhood, the locations of which are indicated by arrows. (b) The house in front of the first well, partially standing but not in use, on the right hand side of the road. (c) The well, the top of which has been closed, equipped with an electrically operated water pump.

Finally, we ponder about the prospect of rebuilding Wallace's Ternate house on the basis of this new information. Although belated, several historical sites of Alfred Russel Wallace in the UK have received some attention. The Dell, in Essex, where he lived from 1871 to 1876 and wrote *The Geographical Distribution of Animals*, has been restored. Similarly, his grave, which had been neglected for many years in a cemetery in Broadstone, Dorset, has also been restored (Loder, 1999). Restoring Wallace's Ternate house is a huge undertaking. A protected heritage status for the site, together with the approval and

support of the government for the reconstruction of the house, need to be secured. The authenticity of the reconstructed house has to be ensured and a new function for the house, perhaps as a small but significant Alfred Russel Wallace and The Wallacea Museum, needs to be negotiated. But considering Wallace's Ternate house is the most important science history heritage site in Indonesia, the project would serve to restore the memory of Indonesia's role in inspiring one of the greatest scientific discoveries of the 19th century.





**Figure 4:** Reconstruction of Wallace's Ternate house: (a) Composite picture of two old houses, constructed following the traditional mode of building, found in the street depicted in Figure 3a. The front of Wallace's house probably looked like the composite shown, except for the two windows. Plan of Wallace's Ternate house in *The Malay Archipelago* (Wallace, 1868), reproduced in Table 2, do not show any front windows. The thatched roof of the composite picture was taken from another house. (b) The wall and (c) ceiling, constructed from leaf-stems of the sago palm, fitted in wooden framing, as described by Wallace (1868). (d) An old well at the back of a house ruin, in the former Dutch section of the city, resembling the partially standing deep well in Santiong described in Figure 3.

### Acknowledgements

We are grateful to Dr. Ahmad Nadjib Aziz and Dr. Mochtar Zein Pattiha for generously sharing their local knowledge of the "Wallace house" in Santiong, which had inspired this study. We thank Barham Dayan (Head of National Unity and Politics Office, City of Ternate), Wahab Ibrahim (Head of Sanitation Department, City of Ternate) and (Lies) Rahayu Dwi Sulistyowati (Eijkman Institute: The Wallacea Foundation Supported Project on Wallacea Marine Biodiversity) for their

invaluable contribution to this work, in particular in assisting our surveys of relevant historical sites around the city of Ternate, and in identifying and interviewing elderly inhabitants of the Santiong neighborhood. The supports of the City for Ternate, the Indonesian Institute of Sciences (LIPI) and US Biosecurity Engagement Program (BEP)—through CRDF Award BEP-21002 to the Indonesian Academy of Sciences and The Wallacea Foundation—in the organization of the First International Symposium on

Alfred Russel Wallace and the Wallacea (Makassar, 10–13 December 2008) are gratefully acknowledged; the present study was conceived during its Pre-Conference (2–3 December 2008). The generous supports of the Regency of Wakatobi, the USAID, through (US) NAS PGA-2000003541, and of the American Society for Microbiology have allowed the organization of the Second International Symposium on Alfred Russel Wallace and the Wallacea, in Wakatobi on 10–13 November 2013, in commemoration of 100 years of his death.

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