Chapter 1
Introducing *First Islanders*

The islands of Southeast Asia – Sumatra to the Moluccas, Taiwan to Timor (Figure 1.1) – present prehistorians with a unique opportunity to study some of the earliest recorded interactions between humanity and the oceans. This region has witnessed some remarkable changes in geographical configuration throughout the past 1.5 million years, throughout both an extinct hominin and an extant *Homo sapiens* presence. Land bridges have alternated with coastal submergence and tectonic activity has created some of the greatest volcanic eruptions in earth history, together with very rapid rates of crustal movement. An amazingly diverse variety of tropical wildlife (including humans!) has passed to and fro, some across land bridges and some across one of the most significant biogeographical divides on earth, which many of us know as the "Wallace Line." This delineates the western edge of the Wallacea region of biogeographers, which extends from Borneo and Bali across to the continental shelf of New Guinea and Australia. Because of its multiple sea passages, Wallacea has always separated the Asian and Australian continents, ensuring that cattle and pigs never met kangaroos and wombats until humans started to interfere with their natural distributions.

In terms of ocean travel, hominins reached the island of Flores across at least two sea passages around 1 million years ago, or perhaps before. Modern human ancestors crossed multiple sea passages to reach Australia and New Guinea at least 50,000 years ago. Within the past 5000 years these islands have fueled the genesis of the greatest maritime migration in human prehistory, that of the Austronesian-speaking peoples, who made absolutely incredible canoe voyages to reach places such as Guam, Madagascar, Easter Island, New Zealand, Hawai'i, and even South America. These voyages occurred over a period of more than 4000 years, dating between 3000 BCE and 1250 CE if we begin in Neolithic Taiwan and end with the Maori settlement of New Zealand, but the sheer achievement demands great respect from all humanity and indeed was the main attraction that persuaded me to migrate from England to New Zealand in 1967, in order to study Polynesian origins and archaeology (Bellwood 1978a, 1978b, 1987).

First Islanders: Prehistory and Human Migration in Island Southeast Asia, First Edition. Peter Bellwood.

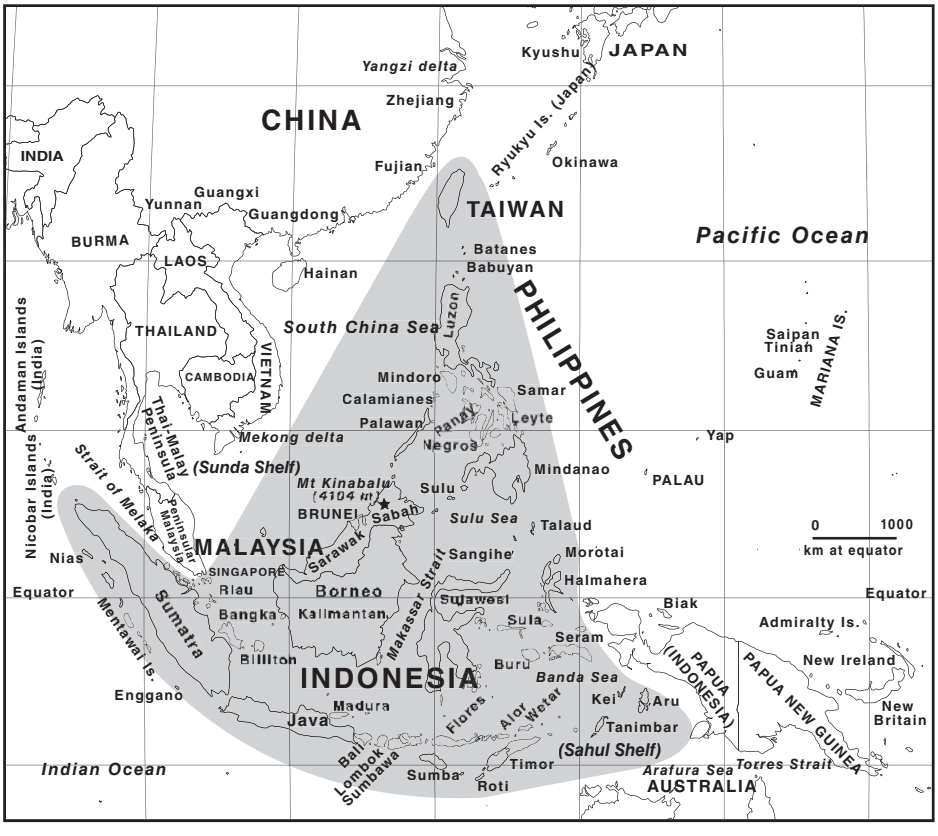

Figure 1.1 The basic geography and definition (shaded area) of Island Southeast Asia in its regional setting. Source: base map by Multimedia Services, ANU; details added by the author.

During my career as an archaeologist, I have to admit that I have always found the ancestries and migrations of human populations, whether still living, or extinct and deep in the past, to be amongst the most interesting aspects of human prehistory. This book, therefore, presents a multidisciplinary reconstruction of the biological and cultural migrations of the inhabitants of Island Southeast Asia during the past 1.5 million years, finishing on the eve of the early historical Indic and Islamic kingdoms and religions between 500 and 1500 CE. With its focus on migration, this book links with my three other recent Wiley-Blackwell books – *First Farmers* (2005), *First Migrants* (2013), and *The Global Prehistory of Human Migration* (ed. 2015). For *First Islanders* the geographical canvas is far smaller, although I must on occasion extend my investigations as far away as the Yangzi Valley, Mainland Southeast Asia, Australia, and the islands of Oceania in order to put everything into its proper perspective.

I have also traveled a great deal in Island Southeast Asia during my career, as no doubt will have many readers of this book, and one fundamental observation never ceases to interest me. The seasoned traveler in Island Southeast Asia will be impressed by the panoply of ancient Hindu and Buddhist temples in Java, by the cultural achievements of Hinduism in Bali, by the modern vibrancy of Islam in most regions of

Indonesia and Malaysia, and by the extensive influence of Christianity in the Philippines and parts of eastern Indonesia. These cultural and religious traditions were, and still are, very different in many ways from those of prehistoric times. They were external to Southeast Asia in origin, and even if the outsider religions sometimes became admixed with indigenous beliefs they still reflected the penetration of Southeast Asia by the cultural and religious interests of far-away societies. With this in mind, it is remarkable to me that the modern Island Southeast Asian peoples themselves, in their biology and languages, are entirely indigenous and have been so since long before the age of international trade and empires. These people do not speak languages derived from Sanskrit, Arabic, Spanish, or Dutch, and have never done so, despite a borrowing of large numbers of often specialized vocabulary items from these external linguistic sources. They carry indigenous DNA, apart from some minor immigration of genes, mostly on the male side, during historical times.

Anyone who has read Alfred Crosby's *Ecological Imperialism* (1986) will realize why this situation exists. The indigenous populations of Island Southeast Asia were already numerous and densely settled 2000 years ago, living in a tropical landscape that was unsuitable for more westerly Eurasian settlers with their Fertile Crescent domesticated crops and animals. They were also protected by a suite of diseases that literally stopped many would-be invaders from temperate lands dead in their tracks. Unlike their less fortunate cousins in the heavily colonized regions of the Americas and Australasia, Island Southeast Asians lived sufficiently close to the teeming populations of Eurasia to be only lightly affected by the diseases of immigrants, to which they had reasonable levels of immunity. Instead, their own tropical diseases often turned the tables in the other direction, as any visit to an early European cemetery in the region will probably reveal.

In other words, the peoples of Island Southeast Asia, in terms of biological and linguistic genesis, were essentially in existence almost as they are now by at least 2000 years ago. Since that time there has been a great deal of population admixture over the whole of Island Southeast Asia, as is to be expected given the lively history of the region in trade, commerce, and sea-borne interaction. But were we to travel with a time machine across the region in 500 BCE, the faces that would hopefully smile at us as we landed on each island would look essentially much as they do today.

This Book

The predecessor of this book, entitled *Prehistory of the Indo-Malaysian Archipelago*, was first published in 1985 by Academic Press in Sydney. A revised edition was published in 1997 by the University of Hawai'i Press in Honolulu, and translated into Bahasa Indonesia as *Prasejarah Kepulauan Indo-Malaysia* by PT Gramedia Pustaka Utama in Jakarta in 2000. In 2007, the ANU E Press (now ANU Press) republished the revised edition as a third edition, but with only a new preface – the remainder of the text was reprinted exactly as it was in 1997. This third edition remains in print, available for free download at http://press.anu.edu.au/titles/prehistory-of-the-indo-malaysian-archipelago/, and

it continues to reflect the state of knowledge about the region in the mid-1990s. What you are about to read here is a new book that builds upon the foundation of *Prehistory of the Indo-Malaysian Archipelago*, rewritten and updated with a new title and a new chapter organization.

Why a new book? The answer is basically that *Prehistory of the Indo-Malaysian Archipelago* is now out of date and simple revision of the existing structure is no longer sufficient. The time has come for a new perspective, not just from me, but also from a number of my colleagues who specialize in areas of research that are becoming ever more complex and prolific, such that a single individual can no longer keep on top of absolutely everything. For instance, here are some important aspects of Island Southeast Asian prehistory that have undergone fundamental change in terms of both data and interpretation since the text of the second edition of *Prehistory of the Indo-Malaysian Archipelago* was submitted to the publisher in 1995:

1. The Pleistocene biogeography of Island Southeast Asia is better understood now than 20 years ago, especially in terms of the glacial–postglacial fluctuations in sea level, temperature, and rainfall during the past 100,000 years. Much new research has, of course, been driven by the current world concern with the dangers posed by the El Niño climatic phenomenon and by anthropogenic global warming.
2. As far as new discoveries in the Southeast Asian fossil record are concerned, we can point to the 2003 and 2016 publications of the bones of a new hominin species from Flores island in eastern Indonesia, the tiny *Homo floresiensis*, as well as to other small archaic hominin remains dating from almost 70,000 years ago from northern Luzon in the Philippines. There have also been considerable strides in the craniometric analysis and absolute dating of many early modern human (*Homo sapiens*) remains from Late Pleistocene contexts.
3. It is now generally agreed by geneticists, biological anthropologists, and archaeologists alike that ancestral *Homo sapiens* did not evolve "multiregionally" all over the Old World, but evolved in and spread out of Africa between 100,000 and 50,000 years ago. For instance, few today would favor continuous multiregional evolution from *Homo erectus* in Java into the modern indigenous populations of Indonesia and Australia/New Guinea. There was, however, some degree of admixture between modern humans and archaic (and now-extinct) hominin species, such as Neanderthals in western Eurasia and so-called "Denisovans" in Southeast Asia. None of this was at all clear in 1995, although even then I tended to favor an "Out of Africa" rather than multiregional scenario for the origins of *Homo sapiens* in Eurasia.
4. There have been absolutely fundamental advances in the past decade in understanding the biochemistry of the human genome, both modern and ancient. In 1995, little could be stated from genetics about deeper human history beyond the level of mitochondrial DNA, blood groups and serum proteins, since whole genome and ancient DNA studies were simply not available at that time. Today, geneticists can scan and compare whole human genomes and even extract DNA from 300,000-year-old

skeletal remains (in Europe, but not yet in Southeast Asia!). The advances in genetic knowledge about population origins and ancestries have been astonishing, and are coming to dominate international publication venues.

5. The most recent statistical analyses of craniofacial variables in prehistoric cemetery populations are also of tremendous importance and allow us to witness the arrival of an Asian Neolithic genetic and phenotypic population throughout much of Island Southeast Asia, commencing about 3500 BCE in Taiwan. This population admixed with the preceding Australo-Papuan populations who were dominant to as far north as southern China and Taiwan prior to the Neolithic. The results are still visible today in many populations in southern and eastern Indonesia.
6. There have been major advances in recent years in understanding the beginnings of rice and millet agriculture in central China and the consequent spreads of Neolithic farming economies and human populations with rice, pigs, and dogs into southern China, Taiwan, the Philippines, and Vietnam. There have also been major archaeological research projects in Taiwan, the Philippines, and Indonesia that provide much clearer dating and directionality for the whole Neolithic migration process.
7. In collaboration with several of my colleagues who have contributed their invited perspectives to the following chapters, evidence is provided in support of a very important Neolithic movement through Taiwan into the Philippines, carrying Austronesian languages and Neolithic material culture, including the cultivation of rice. This commenced sometime between 2500 and 2000 BCE and passed through the Batanes Islands into northern Luzon. Although this "Out of Taiwan" hypothesis still has critics, in my view none provide a coherent multidisciplinary case for any other *major* hypothesis to explain the ancestry of early Austronesian-speaking populations. While the Out of Taiwan hypothesis was clearly stated in *Prehistory of the Indo-Malaysian Archipelago*, the multidisciplinary evidence in favor of it has now become overwhelming.
8. In various stages between 2200 BCE and 1200 CE, ancestral Austronesian-speaking peoples undertook further migrations across a vast area of the earth's surface. They settled throughout the Philippines and Indonesia, in all of the Pacific Islands beyond the Solomons, and westwards into Peninsular Malaysia, Vietnam, and Madagascar. Accordingly, it is possible to add new observations on the first truly long-distance voyagers in world prehistory, for instance the ancestral Chamorro population of the Mariana Islands and the people who produced Lapita pottery in Island Melanesia and western Polynesia. The movement from the Philippines to the Marianas around 1500 BCE marked the beginnings of Austronesian long-distance seafaring, in this case perhaps across 2300 km of open sea. The Lapita movement around 900 BCE from Island Melanesia into western Polynesia, by populations now known to be of Asian Neolithic genetic ancestry, continued this expansion process and eventually led to the settlement of the furthest-flung islands on the earth's surface.
9. Although New Guinea is not dealt with in detail in this book since it is not considered a part of Island Southeast Asia, major advances in understanding the

archaeological record of the New Guinea Highlands reveal this area to have been an indigenous source of a food-producing economy in the mid-Holocene, with potential repercussions in the prehistory of eastern Island Southeast Asia and Island Melanesia.

10. There have been major advances in post-Neolithic archaeology in Island Southeast Asia, especially concerning the exchange of Taiwan nephrite ear ornaments across and around the South China Sea. New understanding has also developed of Indian contact-era archaeology through the excavation of settlements dating to around 2000 years ago in southern Thailand and Bali, and of the impact, by around 500 BCE, of bronze-working traditions of Mainland Southeast Asian origin on the indigenous Early Metal Age societies of western Indonesia. The Early Metal Age also witnessed the migrations out of Island Southeast Asia (especially Borneo) of ancestral Chams to Vietnam, Malays to Peninsular Malaysia, and Malagasy to Madagascar. Interestingly, Taiwan at this time continued to interact mainly with other regions of Southeast Asia, rather than with Qin and Han Dynasty China.

This new book differs from its predecessors in my decision to ask many of my colleagues to add short chapters, under their own names as authors, describing their disciplinary perspectives on specific aspects of Island Southeast Asian prehistory. The total field covered by this book has now grown very large and the rate of publication increases continually, not just in quantity but also in degree of complexity. The time has come for collaboration between disciplinary specialists, and while I can read and understand what scholars in disciplines outside my own field (archaeology) have to say, I feel more comfortable if they also appear in person and in support. I do not wish to suggest that all will agree entirely with my views, since research in a field of the humanities such as human prehistory cannot proceed very far if everyone agrees in total unison. But I also know that our views are mostly in accord.

I should also add that in *First Islanders* I have replaced the term "Indo-Malaysian Archipelago" with "Island Southeast Asia." The former, while undoubtedly still valid and mellifluous, can give a wrong impression that this book is concerned only with Indonesia and Malaysia, thus leaving out Taiwan and the Philippines. Another difference between this book and *Prehistory of the Indo-Malaysian Archipelago* is that the latter still contains additional sections on the ethnography of the modern inhabitants (Chapter 5), on the Hoabinhian lithic industries of southern Thailand and Peninsular Malaysia (part of Chapter 6), as well as on the Neolithic of the Malay Peninsula (Chapter 8). I consider these sections still to be reasonably up to date and they have not been imported into *First Islanders*, which is focused more deeply on Island Southeast Asia *per se* rather than the Malay Peninsula, and on prehistory prior to 500 CE as reconstructed from the disciplines of archaeology, linguistics, genetics, and biological anthropology. *First Islanders* also has a stronger focus on human migration than did *Prehistory of the Indo-Malaysian Archipelago*.

A Note on Dating Terminology

Chronological statements in this book are always based on solar years, expressed as "years ago" for the Pleistocene and early Holocene (11,700 to 8200 years ago for the latter), and thereafter BCE (Before Common Era) and CE (Common Era, i.e., after AD 1) for the middle and late Holocene. Dates in millions of years ago are abbreviated to **mya**, and in thousands of years ago to **kya**. In a broad-scale review such as this, there is no need to refer to individual uncalibrated laboratory radiocarbon determinations.

The terms Pleistocene and Holocene refer to geological epochs. The former spanned the period from 2.58 mya to 11.7 kya, the latter date marking the end of the Younger Dryas brief return to glacial climatic conditions (Head et al. 2015). The Holocene has spanned the past 11,700 years (or roughly 10,000 uncalibrated radiocarbon years) and is still unfolding. It commenced with the establishment of current interglacial climatic conditions across the world after the Younger Dryas, and has witnessed the rise of humanity from a universal baseline of hunting and gathering through food production to statehood and global domination. The Pleistocene was preceded by the Pliocene, within which the earliest recorded stages of human evolution occurred in Africa.

The Pleistocene is divided into three periods of unequal length: Early Pleistocene from 2.58 mya to the Brunhes-Matuyama paleomagnetic reversal at 790 kya, Middle Pleistocene from 790 kya to the beginning of the last interglacial at 130 kya, and Late Pleistocene from 130 kya to the beginning of the Holocene at 11.7 kya. The Late Pleistocene contained the penultimate interglacial and final glacial periods, a time of massive change in global environments in which anatomically and behaviorally modern humans were propelled into prominence, and other more archaic hominin species in Indonesia, such as *Homo erectus* and *Homo floresiensis*, finally succumbed to extinction.

A Note on Archaeological Terminology

The basic structure of this book still revolves around the technological phase, or "age," system that has underpinned Eurasian (but not American!) archaeology since the nineteenth century. I make no apologies for this, but stress that clear definition is necessary from the outset, especially when we are discussing the evolving products of human technology (stone, bone, shell, pottery, metal, glass, etc.). There are four fundamental technological phases across the Southeast Asian region, overlapping in date and cultural content, but each also marked by one or more new marker combinations or appearances.[1]

Paleolithic. In Island Southeast Asia, the Paleolithic continued from the first Pleistocene appearance of stone tools in Java and Flores to the regional beginnings of the Neolithic, the latter between 3500 BCE in Taiwan and 1500/1300 BCE in southern and eastern Indonesia. In general, the Paleolithic was characterized by flaked and unground

stone, bone, or shell tools, but in its terminal Pleistocene phases and into the Holocene there were a number of additions to the basic Paleolithic repertoire in Island Southeast Asia. These included edge-ground stone tools (Niah Cave, Sarawak), bifacial points (Sabah), ground shell tools (Philippines, southeastern Indonesia, and Timor-Leste), and microliths and backed flakes/blades (South Sulawesi). Further afield, the world's oldest examples of edge-grinding are reported from Japan (Izuho and Kaifu 2015) and tropical northern Australia (Geneste et al. 2012), dating back to around 38 kya. The Paleolithic was the long time span when both archaic hominins and early modern humans appeared in Island Southeast Asia, although the secondary elaborations just listed belong to a time when archaic hominins were extinct and only modern humans existed.

Para-Neolithic. This term Para-Neolithic[2] is used for a specific set of sites in southern China, northern Vietnam, and possibly Peninsula Malaysia that are defined by continuing hunter-gatherer economies and Paleolithic technology, but with the additions of *both* fully polished and symmetrically beveled stone axes, usually hammer-dressed from river pebbles, *and* simple vine-rolled or cord-marked pottery with gently inflected rather than angular rim and body contours. The presence of both of these artifact categories means that this phase deserves a special recognition. These Para-Neolithic sites belong to the early and middle Holocene and were located on the southern fringes of the contemporary central Chinese Neolithic, which commenced around 7000 BC. No examples are yet reported from Island Southeast Asia. The Para-Neolithic sites of China and Vietnam are discussed further in chapters 4 and 5, partly because of their carefully analyzed human burials with their implications for population history in Island Southeast Asia.

Neolithic. The Neolithic in Southeast Asia is defined by a presence of domesticated animals and crops, polished stone uni-beveled adzes (as opposed to axes) and body ornaments, and pottery of complex shape and decorative style (slipped, stamped, incised, with angled or inflected body contours and rims). One must bear in mind that very few tropical sites in Island Southeast Asia have paleobotanical records, so dogmatic statements to the effect that food production did or did not exist in specific archaeological circumstances are to be avoided. However, food production in general is an essential element of the Neolithic definition and its presence in Island Southeast Asia is strongly supported by Austronesian comparative linguistic data and increasing numbers of archaeobotanical analyses, especially in Taiwan and the northern Philippines. The Neolithic was also a period of major demographic growth according to archaeological and cranial/genetic data, the latter documenting the immigration of a population from southern China and Taiwan with Asian Neolithic as opposed to Australo-Papuan craniometric and genetic affinities. The Neolithic in Southeast Asia is associated with the first large-scale open-air settlements of village type, and Neolithic burials were mostly extended supine or placed in large earthenware jars, often with pots or body ornaments as grave goods, unlike their tightly folded Paleolithic and Para-Neolithic predecessors.

Early Metal Age. The Early Metal Age, or "Paleometallic" in much Indonesian literature, is marked by the appearances of copper, bronze, and iron, with the oldest

items of copper/bronze dating to about 600–500 BCE in southern Sumatra and iron perhaps a little later. Bronze appeared slightly before 1000 BC in Vietnam and Thailand, thus definitely earlier than iron, and bronze was present even earlier (by 2000–1500 BCE) in central China. The Early Metal Age is also associated with the first evidence of contact with traders from the growing Hindu and Buddhist civilizations of Gangetic and eastern peninsular India, with Sri Lanka. In Taiwan, the Early Metal Age commenced around 400 BCE, surprisingly with almost all attested cultural contacts with Island Southeast Asia to the south rather than with contemporary dynastic China.

The period after 400 CE is essentially **Early Historical**, focusing on early trading networks involving China and India, located in regions such as the Red and Mekong river deltas, the Malay Peninsula, Sumatra, and Java. By 500 CE, inscriptions in Sanskrit and Austronesian languages, together with the first temples dedicated to Indic religions such as Hinduism and Buddhism, were beginning to appear across the region from Burma to eastern Borneo. This book is not concerned in detail with the Early Historical period or its art history, except for its roots in the indigenous societies of the preceding Early Metal Age.

The reader will note that I have not attempted to put rigid chronological boundaries around the above archaeological ages, simply because the pace of new discovery, with so many new radiocarbon dates being published all the time, makes absolute precision rather an elusive concept. Furthermore, in recent millennia we see gradients in the dating of shifts between ages, for instance into the Neolithic, as we move across geographical space. Absolute chronology is of enormous importance in specific instances of understanding how peoples and cultures have evolved through time, but imposition of a region-wide chronology for no specific purpose is unwise.

Pronunciation and Place-names

In Indonesian place-names the "c" is pronounced "ch" as in English "church," "ng" is pronounced as in "singer," and "ngg" as in "finger." The common place-name elements *gua* (cave or rock shelter), *liang* (aperture or cave), *gunung* (mountain), *bukit* (hill), *tengkorak* (skeleton), *tulang* (bone), *angin* (wind), *sungai* (river), *batu* (rock), and *kota* (town) are all in the modern Bahasa Indonesia and Malay vocabularies. Chinese place-names are all in *pinyin* Romanization for both China and Taiwan. Vietnamese place-names are rendered without diacritical (tone and vowel) marks.

Notes

1. Naturally, in preparing this edition I have thought deeply about the possibility of replacing this phase sequence with another classification, but any such classification will always involve a presence of human behavioral concepts that are often very hard to verify from the archaeological record. For instance, Indonesian archaeologists (e.g., Soejono 1984) have for many years used a three-part descriptive terminology that relates directly to aspects of behavior. This commences with *masa berburu dan mengumpulkan makanan* (age of hunting and food collection), with simple and extended (*sederhana* and *lanjut*) phases that correspond

to the single-phase Paleolithic as defined here. It then progresses into *masa bercocok-tanam* (age of planting, or Neolithic), and finishes with *masa perundagian* (age of craftsmanship, or Early Metal Age). Use of such a system does not in my view solve the problem of classifying the hundreds of undated sites in Island Southeast Asia that lack diagnostic artifacts or economic evidence, any more than does the system advocated here. I suggest we keep the *status quo*.

2. I am using the Oxford Dictionary definition of the prefix para-, meaning "beside" (as in "paramilitary"), or "beyond" (as in "paranormal").

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