

# **The Austronesians in the New World: a chronostratigraphy**

2014 International Conference on Formosan Indigenous  
Peoples: Contemporary Perspectives.

15-17 September 2014.

Academia Sinica, Taipei, Taiwan

**Roger Blench**

**Kay Williamson (凱威廉森) Educational Foundation**

# Trans-Pacific contact between Asia and the New World

- ❖ The notion of trans-Pacific contact between Asia and the New World was formerly confined to the speculative fringe of prehistory (e.g. Lang 1834). Collections of speculations such as those of Graebner (1913) and Rivet (1926) require a great deal of sorting to extract useful insights from generalised resemblances. The more careful work and mapping of cultural traits in Nordenskiöld (1920, 1924) has not been sufficiently analysed for the implicit hypotheses.
- ❖ Thor Heyerdahl's (1941, 1950, 1952) claims that American Indians rafted into the Pacific and originated Polynesian cultures were treated with proper scepticism at the time of their publication.
- ❖ However, since 2000, an expansion of evidence from archaeobotany and genetics has made contact indisputable. Apart from undisputed transfers such as the sweet potato, there are many items of material culture which have a striking SE Asian and New World distribution which point to probable trans-Pacific transmission.

# Trans-Pacific contact between Asia and the New World

- ❖ Given that the Austronesians were the possessors of proven maritime technology westward voyages by American Indians can be all but excluded. A new wave of publications has taken in genetics, archaeology and material culture (e.g. Jones et al. 2011).
- ❖ A characteristic of these papers is that they tend to recycle the same suppositions from one publication to another and by and large ignore the proposals in older works in European languages.
- ❖ The challenge is now becoming the assign dates, routes and cultural transfers which may not leave archaeological traces.

# Trans-Pacific contact between Asia and the New World

- ❖ There are three fairly clear phases of maritime contact with the New World, with the earliest between the Philippines/Borneo and Meso-America and possibly South America.
- ❖ This must have taken place early in the colonisation of SE Asia and involved the transfer of the blow-pipe and the backstrap loom. Sailing rafts and characteristic 'birdman' images are found in Ecuador.
- ❖ Chickens travelled to South America and are found in the Chilean archaeological record. A third phase, relatively late, may have been between New Zealand and other parts of Southern Polynesia and Chile, resulting in transfers of types of ceremonial axe, the chicken and the settlement of Chilote.
- ❖ A case has also been made for contact with the Chumash Indians of California, with the transfer of sewn boats and compound fish-hooks,

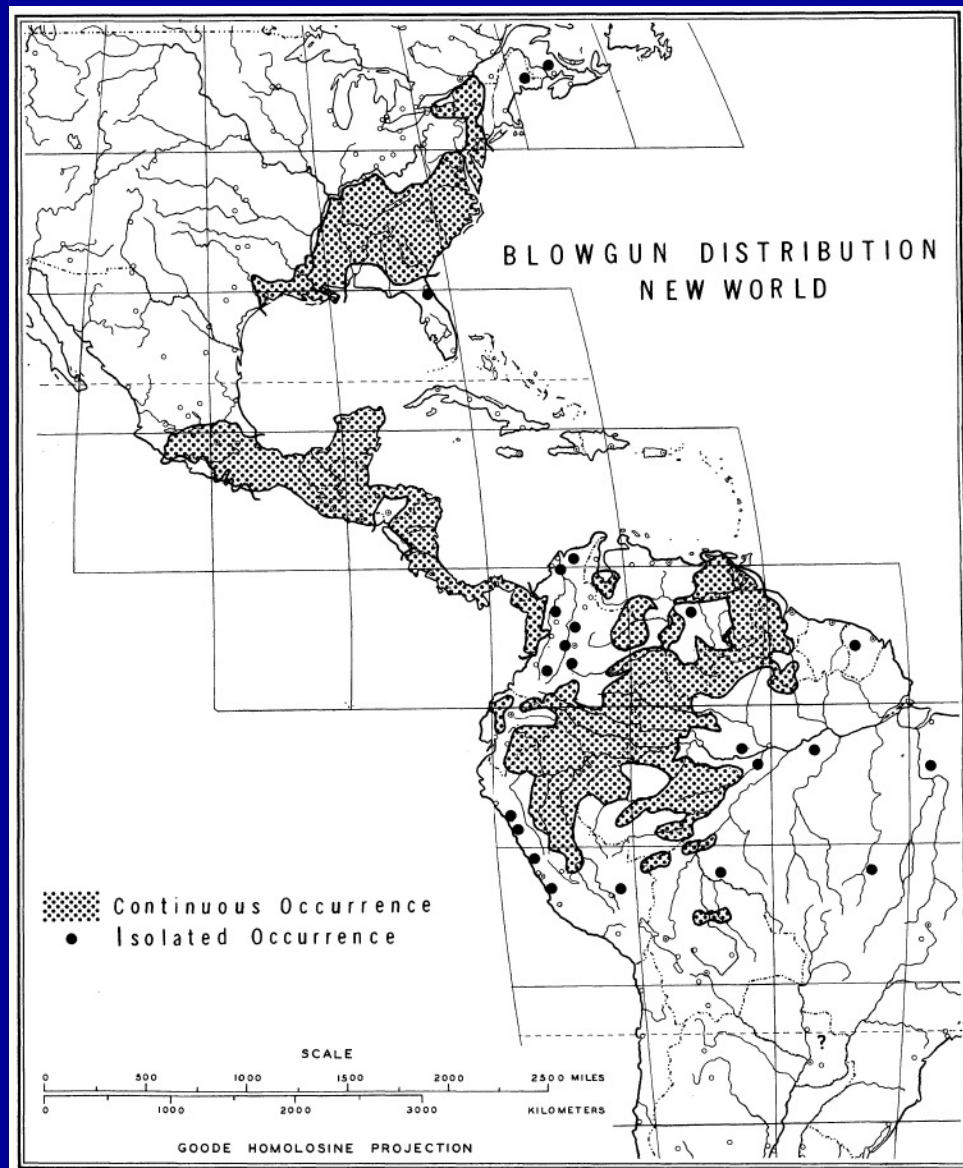
# The blow-gun I

- ❖ One of the most striking examples of a technology spread by the Austronesians is the blow-gun
- ❖ It occurs in North and South America and in SE Asia, but not in Africa or Australia





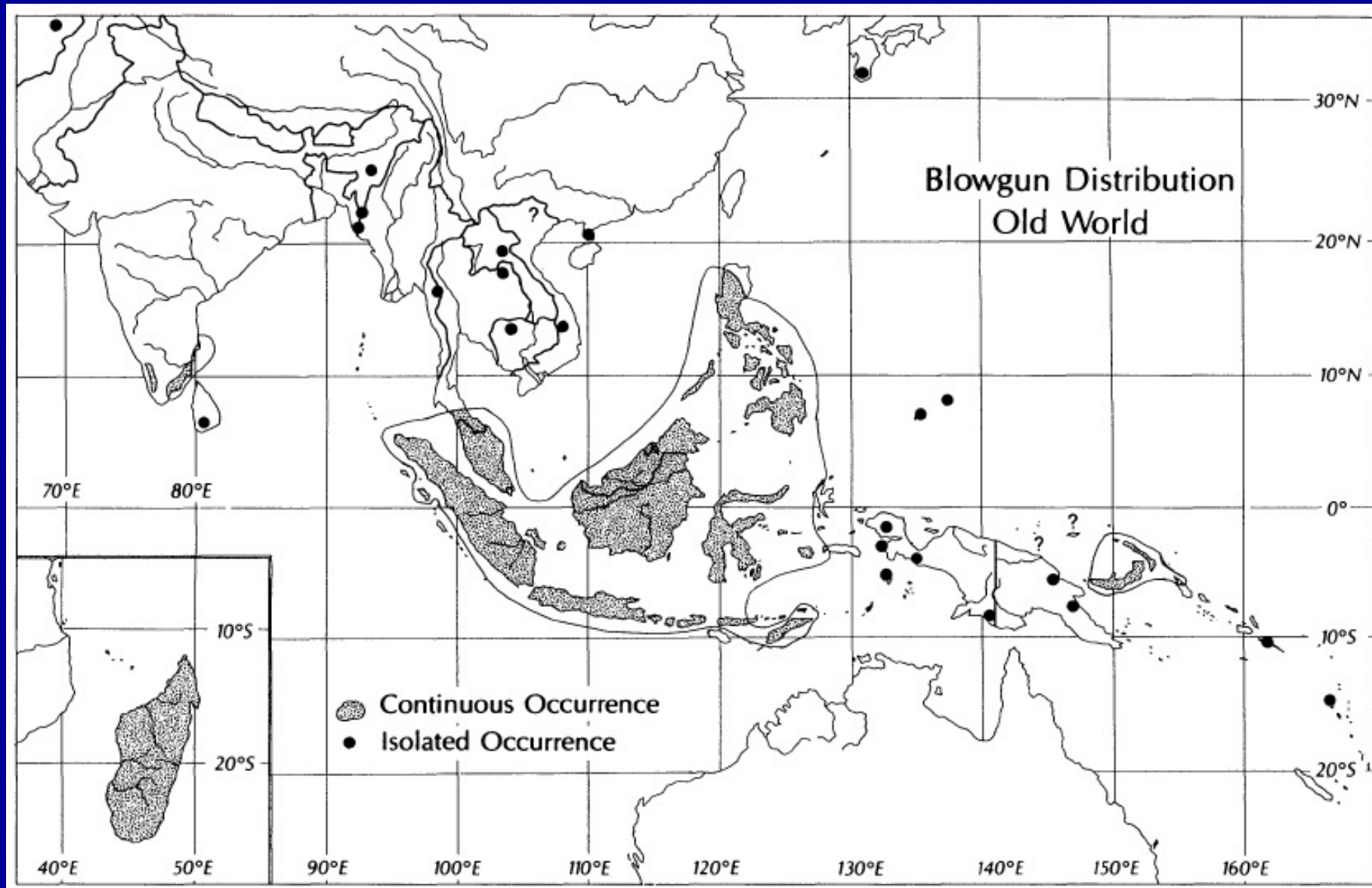
# The blow-gun II



- Dayak



# The blow-gun III: Old World distribution





# The backstrap loom I

- ❖ The backstrap loom is found from the Himalayas down through to mainland SE Asia and from Taiwan throughout ISEA as far as the New Guinea coast, but also in the Marianas
- ❖ They also occur in two areas of the Americas, Peru and Mexico. Given the similarities of tradition apparently due to contact identified by Anawalt (1992) it could have spread to Peru via a maritime route.

- Bhutan



- Mochica





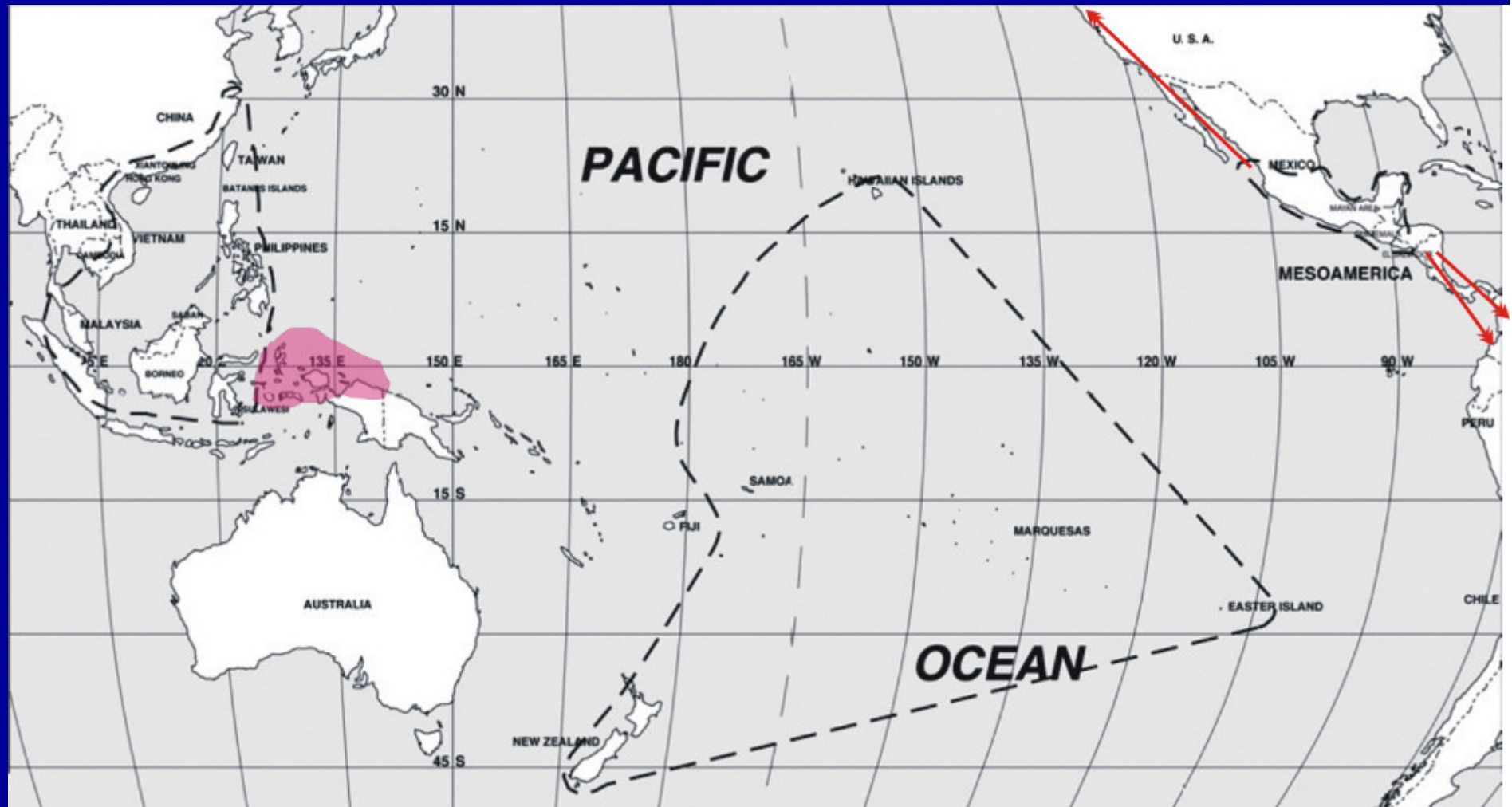
# Bark-cloth

- ❖ Bark cloth is generally used for felted bark fibres, produced through the application of moisture, heat and pressure, and does not include unbeaten bark sewn into clothing.
- ❖ The inner bark of certain trees and shrubs is beaten after the fibres have been softened by soaking or boiling

- Bhutan

- Mochica

# Bark-cloth



- Adapted from Cameron (2008)

# Paper

- ❖ The transfer of bark-cloth technology may have had an interesting secondary consequence in the Americas, the introduction and diffusion of paper.
- ❖ True paper, made by felting shredded inner bark of planted mulberry trees, was produced in China and pre-Columbian Mesoamerica. It is not known exactly where or when paper making began in Mesoamerica, but since it is made from bark of Moraceae, and flattened out with similar beaters it is likely to be connected with bark-cloth.
- ❖ Some researchers put the date between 500 and 1000 CE while others place it earlier to at least 300 CE.

- Amate paper cut out, Otomi, Mexico



# Coconuts

- ❖ The early appearance of the coconut in the New World has been the subject of considerable controversy. The coconut was previously considered a New World domesticate that spread westwards across the Pacific, but very early dates for coconut in the Sepik suggest a Malesian origin (Gunn et al. 2011). Nonetheless, Zizumbo-Villareal & Quero (1998), in a re-examination of the earliest sources, argue that it was present on the west coast of Central America in the pre-Hispanic era. Baudouin & Lebrun (2008) examined molecular markers for Central American coconuts and compared them with insular SE Asia. Their closest similarities are with those of the Philippines and both are quite distinct from the South American coconut cultivars, suggesting two quite distinct introductions. Furthermore such an origin rules out distribution on ocean currents as far as this can be gauged. Whether the date they attach to this introduction (2250 BP) can be justified is more doubtful as a more recent study suggests, on both genetic and linguistic grounds that the coconut is post-Columbian in Meso-America (Clements et al. 2013).



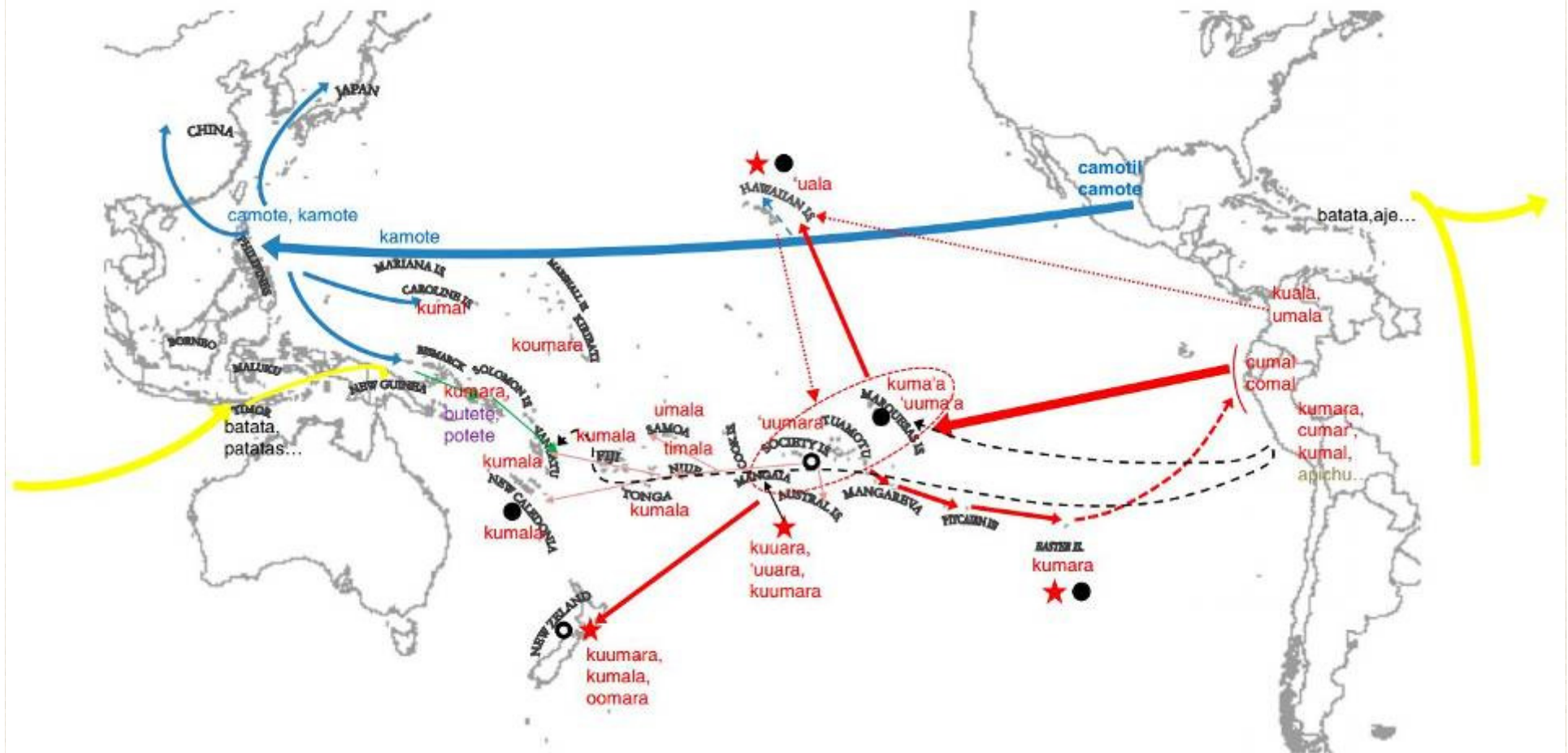
# Contact with Eastern Polynesia

- ❖ Polynesian contact with South America has long been the subject of speculation (Heyerdahl 1950) but accounts of it were more theatre than history (blond, bearded Norwegian against the elements).
- ❖ The model was confused, imagining Amerindians voyaging in the Pacific, despite their known lack of ocean-going craft. A much more credible hypothesis is that Polynesians reached the coast of South America, given their proven maritime skills (Lanning 1969).
- ❖ There is, however, evidence for a South American contribution to the Easter Island gene pool, so it is likely some inhabitants of the New World were carried into the Pacific (Thorsby 2012).
- ❖ Recent discussion has focused on crop plants which undoubtedly did reach Eastern Polynesia from the New World, notably the sweet potato, and
- ❖ the possible introduction of the Polynesian chicken, for which there is now archaeological evidence.
- ❖ The sailing raft also has an anomalous distribution which suggests contact with Ecuador.

# The sweet potato and the bottle-gourd

- ❖ Scholarly scepticism probably cracked with clear evidence that the sweet potato had reached Eastern Polynesia in pre-Hispanic times
- ❖ Apart from the biological evidence, the Quechua and Aymara name, *k'umar(a)*, closely resembles the widespread Polynesian term, *kumala*. Although supposedly Proto-Polynesian *\*kumala* (cf. Easter Island *kumara*, Hawaiian *ʻuala*, Māori *kumāra*) apparent cognates outside Eastern Polynesian must be borrowed.
- ❖ A review of the linguistic and biological evidence has produced an extremely complex model illustrated in the Map (Roullier et al. 2013).

# The sweet potato and its travels



# The 'blue-egg' chicken

Chickens were domesticated in East Asia for both eggs and fighting and were carried to most islands in the Pacific in Polynesian canoes

The 'blue-egg' chicken, a variety of fowl was encountered by the first explorers on the west coast of South America.

Genetic studies of the indigenous chickens have argued that this is likely to be a descendant of the Polynesian chicken (Storey et al. 2007) although Gongora et al. (2008) have vigorously opposed this interpretation.

However, the archaeological evidence appears to be fairly conclusive. Chicken bones radiocarbon-dated to between 1304 and 1424 AD have been recovered at the site El Arenal in the Arauco Peninsula, an area inhabited by Mapuche, which support a pre-Columbian introduction (Storey et al. 2011).

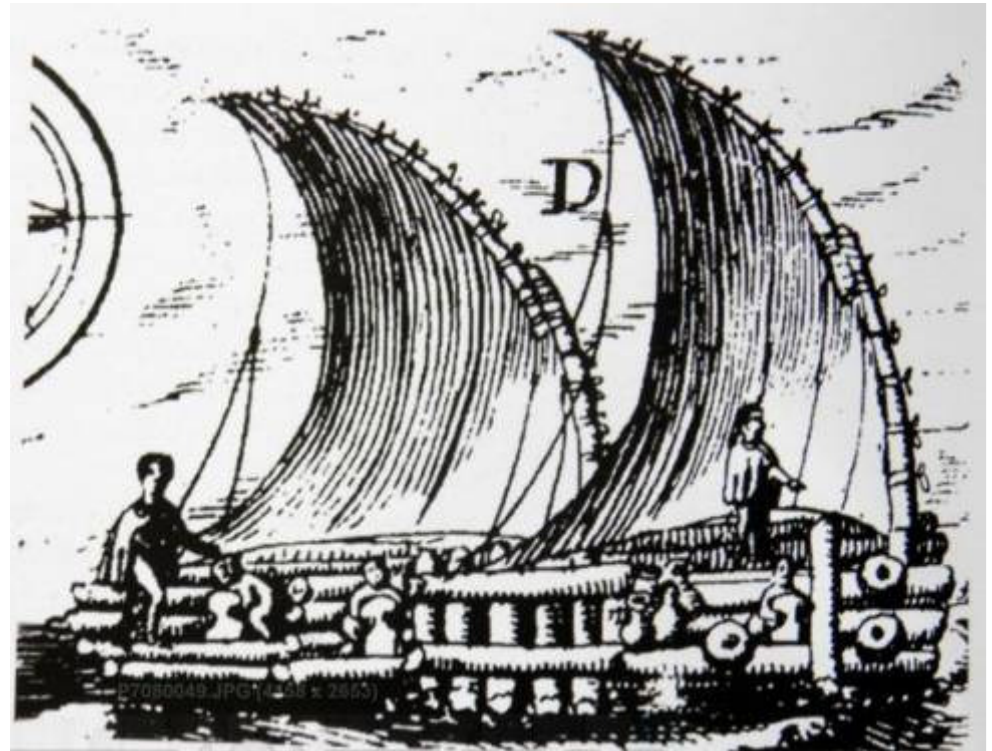


# Sailing rafts

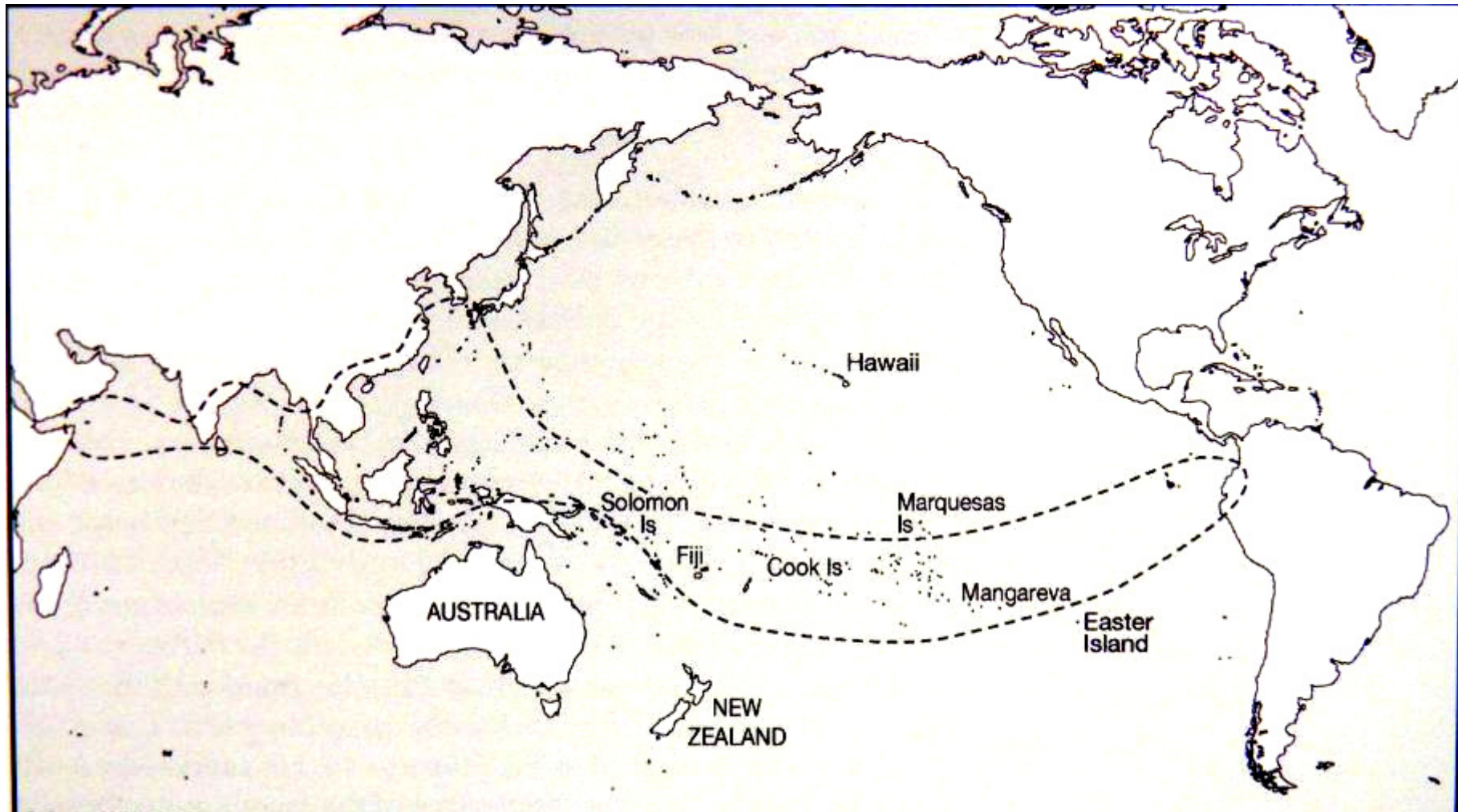
Apart from the much better-known outriggers, the shores of the Pacific have also been home to the sailing raft.

Such rafts were used in the Taiwan Straits in ethnographic times. The first observers to reach the coast of Ecuador found such rafts in regular use.

The map shows the distribution of sailing rafts in the Pacific. This suggests really rather strongly that the South American rafts are introductions from Polynesia.



# Distribution: Pacific sailing rafts



# Ecuadorean spindle whorls showing birdman figures





# Easter Island birdman figures





# Maori and Chilean clubs



# Summary of Transpacific contacts

Era	From	To	Transfers
1500-500 BC	Philippines, Borneo possibly also mainland	NW South America, Meso-America	Blowpipe, backstrap loom, ikat dyeing techniques, paper
400-800 AD	Polynesia	California	Sewn boats, compound fish-hooks
1000-1200 AD	Polynesia	Ecuador, Peru, Chile	Sailing raft, birdmen images, chicken Sweet potato, bottle-gourd (reverse direction)
18th century	Polynesia	Chile	ceremonial axe

## But...

- The lack of definite finds of Austronesian provenance in the New World, with the exception of late chicken bones in Chile, remains a lacuna.
- This could simply be that the relevant coastal archaeology is not being undertaken, and that Americanists are certainly not looking for the sort of transient settlement that might have been established.
- It may be because the voyagers who arrived were not equipped to colonise, although if the argument of this paper is correct, they were able to interact sufficiently to inspect and carry new crop plants and transfer technologies to the mainland populations.
- However, it is equally true that we know very well the Austronesians were crossing vast distances westward from ISEA to colonise Madagascar, yet we have never found an unambiguous trace of their presence there either.

# THANKS

- To Shun Ye  
Museum/Academia Sinica  
for supporting my presence  
here
- To a wide variety of  
scholars for discussions  
over the years especially to  
Phil Piper, Andy Pawley,  
Peter Bellwood and  
Malcolm Ross

