Recent interdisciplinary evidence on Austronesians origins

Recent evidence from archaeobotany and human population genetics, accumulated in recent years, has brought support for a scenario, proposed earlier on linguistic evidence, whereby precursors of the Austronesians originate in north China ca. 8500-7500 BP, in the mid-Huang He Valley neolithic (Cishan-Peiligang culture), out of which the Sino-Tibetan family also evolved. Translocation to Taiwan involved, first, an eastward expansion from the mid-Huang He to Shandong on the eastern seaboard (Beixin and Dawenkou cultures), followed after 6500 BP by a southward coastal expansion, passing the lower Yangtze/Hangzhou Bay rice neolithic (Hemudu culture), then reaching the Fuzhou basin (Tanshishan culture) and crossing to Taiwan ca. 5500 BP (Dabenkeng culture) (Sagart 2008). The extralinguistic evidence cited at the time included (a) reliance on foxtail millet as a staple, moreover imbued with religious status, in both north China and early Taiwan, and (b) ritual tooth ablation in Shandong, east-coast China and early Taiwan at dates corresponding to the proposed coastal expansion.

The site of Nan Kuan Li East (Dabenkeng culture, 5000-4200 BP) on the SW coast of Taiwan, gives a picture of the way of life of the early ANs, including their agriculture. Until very recently, only grains of foxtail and rice had been identified at NKLE. Tsang et al. (2017) finally identified grains of broomcorn millet in large quantities. The names of the three cereals at NKLE had previously been reconstructed to PAN by Tsuchida and by Blust: *beCeŋ ‘foxtail’, *baCaR ‘broomcorn’, *pajay ‘rice’. The two millets were domesticated in north China and were not present outside of north China before 5900 BP (Chengtoushan, central Yangtze). Although rice is usually said to have been domesticated in the Yangtze valley, the oldest fully domesticated rice is north of the Yangtze: in Baligang, southern Henan, ca. 8700-8300 BP (Deng et al. 2015). Baligang is situated about half-way between the Yangtze and the Huang He on a northern tributary of the Yangtze, close to Peiligang, a millet culture (ca. 9000-7000 BP). By 6500-6000 BP, a thousand years before PAN, the three cereals, including a small-grained kind of rice, were co-cultivated farther east in Shandong by a population practicing ritual tooth ablation. Thus Shandong agriculture was virtually identical with later Formosan agriculture.

Simultaneous with the Shandong rice-millets neolithic, rice was under domestication in the lower Yangtze/Hangzhou Bay neolithic (Hemudu culture) c. 7000 BP. This led Blust (1986) to suppose Austronesian origins in the lower Yangtze. He sees the Yangtze as a link to Austroasiatic under the Austric hypothesis he and others support. However, unlike in Taiwan, rice in Hemudu culture was grown in lowland fields with water management (Fuller and Qin 2009) and had relatively large grains. Taiwan archaeologically-derived rices are small-grained, and there is no trace of any kinds of fields at NKLE or anywhere in Taiwan at that date, implying shifting swidden agriculture for all three cereals. The name is true in Shandong. Moreover, the millets were not known in the lower Yangtze neolithic, and ritual tooth ablation was not practiced either.

Congruent with these facts, two genetic studies independently reported specific connections between early Austronesians and Sino-Tibetans. Ko et al. (2014) pointed out that the exclusively Austronesian mtDNA E haplogroup developed out of the M9 haplogroup, whose other daughter is the Sino-Tibetan-centered M9a haplogroup. They found the M9 haplogroup in modern populations distributed along the coast of China in north Fujian, in Zhejiang and the (lower) Yangze Valley. They argued that M9 mutated to E as its carriers were expanding south along the coast of China, from a locus in NE China.

Wei et al. (2016) describe parallels facts with the Y chromosome. The mainland precursor of a uniquely Austronesian lineage referred to by them as B451 were found to distributed along the Eastern China coast from north Vietnam to the south to Shandong, with inland occurrences in north China.
(Hebei, Jilin, Heilongjiang, Qinghai) and Hunan. They suggested that a coastal migration by millet-cultivating groups explained the patterns they observed.

Consilience of linguistics, cultural anthropology, archaeobotany and population genetics makes an origin in Shandong the strongest account of Austronesian origins so far.

References


