

## NOTES

### Part I. The Sarawak River Delta Excavations

[N.B.: These notes are numbered from 1 on for each Part of the Data Paper.]

#### Chapter 1. The Santubong Complex

1. Tom Harrisson and S. J. O'Connor, *Excavations of the Prehistoric Iron Industry in West Borneo*, Cornell University (South east Asia Program, Data Paper No. 72), Ithaca, New York, 1969, 2 volumes. Referred to throughout the text as H.O. (= Harrisson, O'Connor) followed by the page reference (cf. Footnote to Preface)

Cheng Te-K'un, *Archaeology in Sarawak*, Cambridge, England (Heffer) and Toronto University Press, Canada, 1969; for our comments on this valuable little volume, which was prepared with our support, see H.O.: 392; also review by T.H. in *Antiquity* 172, 1969: 326.

For the general background in some detail (671 pages), Tom Harrisson's *The Malays of South-west Sarawak, a Socio-Ecological Survey*, London and Michigan State Univ. (Lansing), 1970, especially pages 117-155.

2. *The Malays of Southwest Sarawak* as above: 522.
3. No separate publication on *Buah* has yet been published, though it is extensively dealt with in H.O. Three seasons were spent there, and a small sample check repeated in 1966 (H.O.: 7). *Tanjong Kubor*, a small headland site, was fully excavated in the season and reported by T. and B. Harrisson, "The Prehistoric Cemetery of Tanjong Kubor," *Sarawak Museum Journal* (hereafter *S.M.J.*), 8, 1957: 18-50. Subsequently, Dr. W. S. Solheim made a more detailed study of the Kubor earthenwares, and published an important analysis, "Prehistoric Earthenwares of Tanjong Kubor," *S.M.J.* 13, 1965: 1-62; this, in turn, stimulated us to re-examine and elaborate on some of the "phallic tops" and other early earthenwares in an iron-working context (H.O.: 141-148; and *Asian Perspectives*, in press)

#### Chapter 2. Sungei Jaong: Creek Backwater at Nowhere

4. The Batu Gambar petroglyph is reproduced in H. Ling Roth, *The Natives of Sarawak and British North Borneo*, London,

1896, 2 volumes; S. Baring-Gould and C. A. Bampfylde, *A History of Sarawak under Its Two White Rajahs*, London, 1909; and M. Colani, *Megalithes du Haut-Laos*, Paris, 2 vols. 1935; in the last see especially her figs. 231 and 232, based on a misunderstanding of the Borneo situation.

5. Colani, at p. 301 as above.
6. Carla Zainie and Tom Harrisson, "Early Chinese Stonewares Excavated in Sarawak," *S.M.J.*, 15, 1967: 30-91, which also contains a full bibliography of the extensive and other publications based on stonewares resulting from the delta and related researches over the years. In press since this is a further classification of the later (post-delta) ceramic wares by B. Harrisson, for the *Brunei Museum Journal* (herein after *B.M.J.*), 2, 1970. See also Appendix D.
7. For a further discussion of dating problems in the delta, see H.O. 17-22. There are particular difficulties with C-14 dating in these tropical open sites, as further examined in some detail for Kota Batu, Brunei, in press with *B.M.J.*, 2, 1970i

### Chapter 3. Bongkizam: The Later Phase

8. See Chapter II.24 for details; also II.9 and 14. The original report on the Bongkizam shrine was published in *S.M.J.*, 15, 1967: 201-222, and is here in part reproduced, in revised and updated form, courtesy of the Curator, Sarawak Museum (Mr. Benedict Sandin)
9. How this adaptive persistence even works on into the living present may be seen in the reference cited at Notes 1 and 2 above. We also were compelled--from the data--to emphasize this aspect at many points in the earlier study of delta iron-working (H.D.).

## Part II. Gold in West Borneo

### Chapter 4. Borneo in the World Gold Setting

1. R. J. Forbes' *Studies in Ancient Technology*, Leiden, 1964; Vol. VIII. This and the associated volumes by the great Dutch scholar are indispensable background for all metal studies; as well as his earlier *Metallurgy in Antiquity*, Leiden, 1950. Also of high value is R. F. Tylecote's *Metallurgy in Archaeology*, London, 1962.

2. C.tH. V. Sutherland, *Gold: Its Beauty, Power and Allure*, New York (McGraw Hill, 1968), an attractive and able account which should be read in conjunction with Timothy Greents *The World of Gold*, New York (Walker), 1968). We are grateful to the authors and publishers of both works for generous permission to draw upon these for some of the more general background here. Mr. Sutherland's illustrations of gold artifacts are especially good.
3. Forbes, 1964, Vol. 8, as in Note 1. This point requires even added emphasis in Southeast Asia, where the written records are seldom specific and clear about topographical and taxonomic identifications; and where, clearly, the Chinese and other texts upon which historians have necessarily most relied are frequently based on second hand, often on third hand information, and on confused, long-range reporting. Very important for Borneo, too, was the regular deception practiced by the native peoples in order to hide and protect their sources of rich supply from the eager overseas traders: the inland pagans misinformed the coastal entrepreneurs, who in turn deceived the maritime traders, who in their turn hid their supply-lines from competitors as well as controllers back home. This must have applied even more to items like gold and edible birds' nests, which others could exploit if located on the ground, than say rhinoceros horn, bezoar stone or camphor, which involved long, difficult jungle search far inland.
4. Klondike calculation from *Newsweek* December 4, 1969; Smuggling estimate from Timothy Green, *The Smugglers*, New York, 1969: 212-224. The chapter on smuggling gold, referred to in our text, is an extension of earlier material in the same author's general work, *The World of Gold* (Note 2), in which of particular relevance here is the detailed description of Indians unceasing greed for gold--now as in ancient times (Chapter 9). India remains an avaricious gold buyer, largely for family and marital status domestic purposes. India has taken 15% of the world's new gold mined in recent years. Much of this has been brought in through the little middle eastern port of Dubai, in the Trucial States, with a population of only 60,000 (similar to Borneo's oil-rich state of Brunei). Dubai is the world's third largest gold buyer. As Mr. Green points out, again, gold occupies such a small space in relation to its value and despite its weight. He has a pleasant variant on Sutherland's spacial picture already cited in our text. Green points out that U.S. \$1,000,000 worth of gold "looks no larger than a puffed up jewel cushion on a foot stool" (*The World of Gold*, 1968: 11). This image is relevant in reality. The special size scale of the gold trade was so tiny in relation to value, compared with iron, precious stones, timber, etc.

5. J. G. Andersson, "The Goldsmith in Ancient China," *Mus. of Far Eastern Antiquities, Bull.* 7, 1953: 1-38. The previous three citations are from Sutherland and Forbes as in Notes 2 and 1 above, respectively.
6. Edward H. Schafer, *The Golden Peaches of Samarkand*, Berkeley, California, 1963, for this and the two preceding citations.

## Chapter 5. Borneo's Gold Sources

7. H. H. Everett and John Hewitt in *Journe Straits Branch, Asiatic Soc.*, 51, 1909; cf. H.O.: 96, also on stray finds from Santubong, *Sarawak Gazette*, 1887: 23 and 1888: 87. T. Harrisson, "Gold and Indian Influences in West Borneo," *Journ. Malaysian Branch, Royal Asiatic Soc.* (hereafter *J.M.B.R.A.S.*), 22, 1949: 33-110; for the full inventory; cf. further on the important Limbang hoard and other finds in our Chapters 14-15 following.
8. Wolfgang Marschall, "Metallurgie und frühe Beseidlungsgeschichte Indonesiens," *Ethnologica* (Cologne), 4, 1968: 29-263; this major study will be further used in our Chapter 16 (and see Note 15 below). The Stamford Raffles quotation is from the 1965 Oxford reprint of his great 2 volumes, *History of Java* (1815), which also has a passage amplifying the points made in our main text and in Harrisson, 1949 (Note 7). This was so well written over a century ago that we venture to reproduce part of Raffles' prose account of 1815 herewith:

"From a calculation recently made, it appears that the number of Chinese employed in the gold mines at Mentrada and other places on the western side of Borneo, amounts to not less than thirty-two thousand working men. When a mine affords no more than four *bengkals* (weighing about two dollars each, or something less than a *tahil*) per man in the year, it is reckoned a losing concern and abandoned accordingly. Valuing the *bengkal* at eighteen Spanish dollars, which is a low rate of estimation, and supposing only four *bengkals* produced in a year by the labour of each man, the total produce is 128,000 *bengkals* worth 2,224,000 Spanish dollars, equal to £556,000 at the rate of five shillings the dollar. But it is asserted, that upon the general run of the mines, seldom less than six *bengkals* per head has been obtained, and in very rainy seasons seven. Taking the median at six and a half *bengkals*, the 32,000 Chinese will procure 208,000 *bengkals* which at eighteen Spanish dollars the *bengkal*

is 3,744,000 Spanish dollars, equal to £936,000. Such is the result of a very moderate calculation of the produce of these mines. According to an estimate made in the year 1812, the annual produce of the mines on the west coast of Borneo was estimated at 4,744,000 Spanish dollars, being an excess of a million sterling. The quantity of gold procured on Sumatra, the supposed golden Chersonesus of the ancients, is according to Mr. Marsden about 30,800 ounces, which at £4 sterling the ounce is worth £123,200, equal to 492,800 Spanish dollars.

"With respect to the disposal of the gold from the mines of Borneo, it may be observed, that every native Chinese, whether employed in the mines, in agriculture, as merchant or artificer, manages every year to remit at least the value of one *tahil*, more or less, of gold to his relations in China. These remittances are generally made by the junks in gold, as it saves freight, is more easily smuggled on shore without the notice of the rapacious Mandarin, and remitted overland to the residence of their families. Taking the Chinese male population who can thus remit at double the number employed in the mines, and supposing one half to be born in the country, most of whom may not remit to China, this remittance would amount to 34,000 *bengkals* or *tahils*, which at eighteen Spanish dollars is 612,000 dollars, or £153,000.

"It is calculated that, one year with another, at least five hundred Chinese return in the junks to their native country with a competency. Several have been known to take away one thousand *bengkals* of gold, many from three to five hundred, but very few return before they have cleared a competency of two thousand dollars, or from one hundred to one hundred and twenty *tahil* of gold. This goes partly in gold; though they prefer investing a part of it in tin from Banka, opium and other articles. Say, however, that they remit one half in gold, five hundred men, at one thousand dollars each, will give five hundred thousand dollars, which added to the small family remittances, accounts for an amount exceeding one million dollars, or £250,000. This calculation, however, seems to be far within the mark, and gives less by one-half than what is usually stated to be remitted to China from the Bornean mines, which has been estimated at a loose guess at two millions of dollars, or £500,000.

"A further amount of not less than the value of a million of dollars (£250,000) is supposed to find its way annually to Western India, and principally to

Bengal, *via* Batavia, Malacca, and Pinang, for the purchase of opium and piece goods. The surplus enriches Java and some of the other islands, in exchange for salt, tobacco, coarse cloths, etc.

"As the mines are worked with so little expence of machinery, the funds necessary for commencing an undertaking of the kind are small; and as the property of the soil belongs to the first occupant, almost every Chinese would become a proprietor, but from the mode by which their services are, in the first instance, secured by the council of proprietors or kongsis. *A parcel of half starved Chinese, enchanted with the prospect of wealth on the golden shores of Borneo, readily find a passage in the annual junks that sail from the mother country to Borneo at ten dollars a head.*"

See also Notes 23-26 below.

9. Sylvain Levi, "K'ouen-louen et Dvîpântara," *Bijdragen* Hague, 88, 1931: 627.
10. G. Coedes, *The Indonesian States of Southeast Asia*, Honolulu, 1969 (reprint).
11. Golden Khersonese hypotheses are considered more thoroughly in Chapter 16.c and d, following. Basically, we do not accept the rather narrow topographical localizations which have fairly generally been advocated--sometimes in contradiction to each other--by textual scholars. More specifically, *none* of these give Borneo serious attention as a major gold source; it is not possible to accept that exclusion in view of the evidence of its role as given in this and other chapters of our main text. Also cf. Note 116.
12. See especially Chapter 16.e for the Tinnevelly affinity in making cut-breach gold-foil leaf, which we identify abundantly from Santubong (Chapter 10) and elsewhere in the islands (11-16). See also Note 87, below.
13. J. A. E. Morley, "The Arabs and the Eastern Trade," *J.M.B.R.A.S.* 22, 1949: 143-176. For the best general background here see O. W. Wolters, *Early Indonesian Commerce* Ithaca (Cornell), 1967.
14. From C. Lassen, *Indische Altertumskunde*, Leipzig, 1961, vol. 4: 937-941 (cf. Marschall, 1968: 75; see Note 15 below).
15. Barbara Harrison kindly worked with Maureen Liebl in preparing this and following summaries and translations from

Marschall's 1968 German thesis (cf. Note 8 above and Chapter 16 of text).

16. On Po-li, Po-ni, etc., see most recently Cheng Te-K'un, *Archaeology of Sarawak*, Cambridge, 1969; of the earlier literature, which is extensive, we here cite W. Groeneveldt "Notes on the Malay Archipelago and Malacca, Compiled from Chinese Sources," *V.Ø.G.K.W.*, 39, 1880: 80. A thorough and critical discussion of all Brunei-Borneo Chinese terminology is in D. Brown's unpublished doctoral thesis on Brunei history, Cornell, 1969: Chapter J, courtesy the author. See also further in Part IV.t
17. Since this was written, we have visited Bali and proved gold-foil in connection with stone sarcophagi there (January, 1970; see Appendix A).
18. Marschall, 1968: 68; see Notes 8 and 15.
19. Chao Ju-Kua's *Chu Fan Chih* text; cf.tW. H. Scott, *Prehispanic Source Materials for the Study of Philippine History*, Manila, 1968: 65-75;tcf. Hirth and Rockhill's translation, Amsterdam, 1966 (reprint of 1911). And see Note 93.
20. Pigafetta's vivid account from Lord Stanley of Alderley's text for the Hakluyt Society, *The First Voyage round the World by Magellan*, London,t1874. See also Pigafetta on Timor as cited in our Chapter 16.b, and other early Brunei references, including pre-Hispanic gold, in Chapter 15; also Note 93.
21. Details in Chapter 15.d following.
22. R. W. van Bemmelen, *The Geology of Indonesia*, The Hague, 1949, 2 vols.
23. J. Crawford, *History of the Indian Archipelago*, London, 1820, 3 volumes at 3: 486; T. Harrison in *J.M.B.R.A.S.O.*, 12t, 1949, see I, note 7. We have earlier quoted Sir Stamford Raffles on Montrado (his Mentrada) in Note 8 above, which gives a dynamic picture of the scale of Chinese gold effort there early in the last century. Compare Note 25 below, and Note 7 above.
24. Theodor Posewitz, *Borneo*, Berlin, 1889: 43; cf. H.O.: 220, Note 20/1, which points out that this authority on minerals devotes 52 pages of his monograph (in German) to gold, 31 to coal, 22 to diamonds, and 6 to iron in the island.
25. Even so, it is likely that the "ghost town" of Montrado seen by T.H. from the air in 1949 was a livelier thing then

than it is today, since (in 1967-9) serious racial clashes occurred in that part of Kalimantan, leading to the virtual elimination of Chinese hitherto so long resident in the Indonesian interior of the southwest. In prehistorical times similar events went unrecorded and remain undetected.

26. G. W. Earl, *The Eastern Seas*, London, 1837; this passage (p. 283) should be consulted and read in full by those interested as it goes on to describe a conducted tour provided for the author next day, including inspection of the sector then being worked, in veins close below the surface, with shallow trenching. He describes the methods of extraction interestingly (p. 283 on). Compare Raffles, two decades earlier, but not from a first hand visit (Note 8).
27. T. Harrisson, 1949 (see Note 7); and more broadly Siri Steven Runciman, *The White Rajahs*, Cambridge, 1960. This large-scale immigration in part led to the Chinese rebellion of 1857 against Sir James Brooke, which in turn resulted in slaughter of the Chinese round Bau and a serious set-back to gold exploration and exploitation throughout the area for the time being. See further in section (b) of this chapter, following.
28. The "border," as such, was simply ignored by Indonesians and Sarawakians and Sabahans until Indo-Malaysian "Confrontation" in 1963 made it a hard-line of distinction, policed and soldiered. This tension is now relaxed, and movement continues in both directions, largely regardless of restriction.
29. Harrisson, 1949, for more particulars on Bau (see Note 7). G. Wilford, 1955, one of a series of monographs from the British Borneo Geological Survey, Kuching, which are full of significant information covering much of West Borneo. Dr. Wilford and his colleagues have helped us at many stages in the investigation of Bornean prehistory and ecology, always with generosity and patience.
30. Spenser St. John, *Life in the Forests of the Far East*, London, 1862, 2 volumes (cf. H.O. 213 on the value of this source), at 2: 331.
31. Hugh Low, *Sarawak*, London, 1848, an excellent source, second only to St. John for the period.
32. Cf. Note 27.
33. St. John, as Note 30, at 2: 331.
34. Bemmelan, 1949, II: 123; see Note 22.

35. A. Lucas in *Sarawak Gazette*, 1949: 30.
36. G. Wilford, 1955: 107; and Harrisson, 1949, cf. Note 29.
37. G. Wilford, 1962, *Annual Report of British Borneo Geological Survey*.
38. Compare the Gedong site with Jaong parallels discussed in Chapter 11 below and to be published in *S.M.J.*, 1969, by R. Nyandoh and LucastChin (in press; see Note 78).
39. *Sarawak Gazette*, 2 July, 1894.
40. T.H. personal observation (to 1963).
41. T. Posewitz, *Borneo*, Berlin, 1889: 263; and H. Engelhard in *Tijdschrift voor Indische-taal*, 39, 1897: 464, 489.
42. H. von Dewall in *Tijdschrift voor Indische-taal*, 4, 1855: 434.
43. C. A. L. Schwaner, *Borneo: Beschrijving van het Stroomgetie van den Barito*, Amsterdam, 1853, vol. 2: 72; Posewitz, 1889: 265; and other sources summarized by Marschall, 1968 (see Note 8 above).
44. Schwaner as in Note 43; summary and translation in H. Ling Roth, *The Natives of Sarawak and British North Borneo*, London, 1896, vol. 2: ccvii.
45. Cited by Roth (Note 44), 2: 237; J. Needham, *Science and Civilization in China*, Cambridge, 1959.
46. Posewitz, 1889: 289; and Harrisson, 1949: 72 as above; A. Nieuwenhuis, *Ouer durch Borneo*, Leiden, 1907, vol. 3: 186; and cf. Marschall, 1968, for survey; further on Malohs in Chapter 6.e, cf. Note 53.
47. Earl, 1837: 264; see Note 26.
48. T. Harrisson and Benedict Sandin, *Borneo Writing*, Kuching, 1966: 109, 200, 239 (S.M.J. Special Monograph); which also carried other references to folk-gold among the inland pagan peoples; cf. Benedict Sandin's numerous other publications of related material in *S.M.J.*, 1955-69.

#### Chapter 6. Gold Appearances and Uses in the Delta

49. *Sarawak Gazette*, July 1, 1874.
50. Wilford, 1955: 159.

51. See Chapter 20 on "Touchstones"; and on "waisted" and other stone tools Chapter 22.b here and H.O.: 234 previously.
52. One such shaft explored by T.H. in 1951 was 43 feet deep.
53. St. John, 1862, 1: 31; for a full ethnological study of the Malohs see T. Harrisson in *S.M.J.*, 12, 1965: 236-350.
54. We have earlier put forward reasons for believing that the prime carriers in overseas traffic for prehistoric West Borneo were often local, pagan peoples in small craft (cf. Bajau, Bugis), rather than primarily large-vessels during a direct trade with the mainland (see H.O.: 196, etc.).

### Chapter 7. Excavated Gold

55. Harrisson, 1949 (Note 7).
56. First published in C. Hose, *Natural Man, a Record from Borneo* London, 1912 (briefly); in more detail with photographs in Harrisson, 1949, and fully in a new illustrated account by T.H. in *B.M.J.* 1, 1969: 57-71. See further at Chapter 15.b following.
57. *Sarawak Gazette*, January 1, 1899.
58. Everett and Hewitt, 1909; see Note 7.
59. As in Note 56; see also Chapter 16.a following.
60. This inventory was made by S.J.O'C. in August 1966 at the request of T.H., then Curator of the Sarawak Museum. All these items were then placed in the safe and strongroom, and the inventory filed and catalogued to correspond.
61. An attempted robbery of pieces on display in the Museum disturbed this set, so that in 1966 it was no longer clear from which one of the two trenches they came. Altogether nine objects are involved from trenches 57/B and D at 24-30 inches?
62. As described in our paper for *S.M.J.* 15, 1967: 197-218, revised in Chapter 24 here. This is, however, the first published inventory of the gold pieces recovered in association with the Silver Ritual Deposit Box containing a golden lingga, and this section should be used in conjunction with Chapter 24 following. See also the Plates.

63. For Tanjong Kubor, see further at Part I, Note 3.
- 64i For instance, Inventory items B.16 and C.4 from Bongkissam and A.34 from there, comparable to A.32 from Maras.
65. It would be unwise to be heavy on the negative evidence here, however. And there is one rather weak possible indication that gold may have been worked in Tanjong Kubor. W. G. Solheim (*S.M.J.* 5, 1965), in his examination of the earthenware sherds from Kubor, found one very thick flat bottomed vessel with a "thin, shiny, hard, black deposit on its inner surface." This deposit and the thickness and shape of the vessel suggested that it was a crucible. It certainly is not one of the standard iron working crucibles of the delta sites which are cylindrical in shape (H.O.). This deserves further follow-up, which we have not yet been able to provide ourselves. If there was Kubor working, it would be at least contemporary with and probably before Jaong (c. 900 A.D. or earlier?).

#### Chapter 8. Gold Associations in the Ground at Jaong

- 66i This Chapter 8 is preliminary to the later extension of ideas to another level of analysis in the fuller megalithic context at Chapters 19-21 of Part III.
67. Two unlisted foil pieces are not included in this table; see further at Chapters 21-22.
- 68i A main theme of Part III in this paper.
69. See further at Chapter 22, etc. The greater part of the extensive Jaong excavations since 1952, including the whole of sectors B, C, E, G, H, M, N, R, T, U, V, and W, did not produce a single piece of gold.
70. Series A typical here for slag-poor X, and Y, for slag rich (see details of these in H.O. 6; and further at Chapter 19 on, here).

#### Chapter 9. Changes in Delta Goldsmithing (Jaong to Bongkissam)

71. The reader may care to consult the Plates at this stage to be clear on exactly what we are writing about, gold-wise.
72. There were 18 gold beads--some excellent--at Bongkissam (D.3-20) as against two rather crude ones from Jaong (D.1-2).

73. The inference here would appear to be for a rather late development of gold-smithing in West Borneo in parallel with but hardly keeping up with the skills evolved alongside in mining and smithing iron (H.O.).

#### Chapter 10. The Median Cut-Breach on Gold Leaf Foil

74. For the relationship further see Chapter 18.
- 75i (vii) The total effect of the design is sometimes not far from the spirals and curls of the mainland Dongs'on culture, though for reasons which lie outside this Data Paper's scope we do not favor making that direct association (so often taken for granted in an extended sense in Southeast Asian prehistory writing) without further study over the whole field. Much of the key material to this purpose is (we hope) in Saigon, and so not presently available to us.
76. This convention relates to what is so often called "repoussé" (French) in the west. Strikingly similar also is a piece found since 1968 at Gedong (next chapter), and we shall later meet striking if remote parallels from Tinnevelly in Southern India (Chapter 16.ē).

#### Chapter 11. Gedong and Jaong

77. Chapter 3.ī previously on this aspect.
78. We are grateful to the Curator (Mri Benedict Sandin) and his staff at the Sarawak Museum for sending a draft of the paper "Archaeological Work at Gedong (1967-1969)," by R. Nyandoh and Lucas Chin, to appear in the 1969 issue of *S.M.J.* now in press; also for photographs reproduced in our Plates here.

#### Chapter 12. Niah Caves and Jaong

79. Barbara Harrisson in *S.M.J.*, 12, 1958: 607 (Lobang Tulang first report).
80. Barbara Harrisson in *S.M.J.*, 13, 1959: 171 (second report).

### Chapter 13. The Iconographic Background for Jaong Suggested

81. T. Harrisson, "Borneo Death," *Bijdragen* The Hague, 118, 1962: 1-41, especially tabulation of 60 variants on pagan burial styles at pp. 7-13. Also following paper by B. Harrisson in *S.M.J.e*, 1967 (Niah Cave reports).

### Chapter 14. Special Piece from Bongkisam

82. This piece was found, before World War II, and before the Antiquities Ordinance required that all such objects must be reported to the Sarawak Museum, which has power to purchase at a fair price any piece over 100 years old.
- 83t A. J. Bernet Kempers, *Ancient Indonesian Art* The Hague, 1959: Plate 222.

### Chapter 15. Other Major Gold Pieces from WesttBorneo

84. Purchased from a trader and the Chinese workmen by Mr. Tan Yeok Seong in Singapore. See H. G. Quaritch Wales, "The Sambas Finds in Relation to the Problem of Indo-Malaysian Art Development," *J.M.B.R.A.S.*, 22t 1949t 4; and Tan Yeok Seong, *Preliminary Report on the Discovery of the Hoard of Hindu Religious Objects, Near Sambas, West Borneo* (Singapore), 1948, and *Journal of the South Seas Society* 5, 1.
85. The Balingian keris handle is discussed in detail and illustrated by T. Harrisson in *J.M.B.R.A.S.*, 39, 1966: 175-181, to which reference should be madet The 1292 A.D. attribution is from our Cornell colleague and friend, the late Mrs. Claire Holt, and is further discussed in the aforesaid papert
86. Limbang Hoard literature as detailed in Note 56 above.
87. There is also quite a clear parallel with some of the smaller so-called "diadems" from southern India (Chapter 16.e.2; cf. Note 12 above)t
88. See also on Brunei gold at d. below--especially for the Javan goldsmiths imported c. 1400 A.D. On Java gold see Pigeaud as cited in Notes 109 and 110 below.
89. S. Runciman, 1960: 140, as in Note 27.

90. In Brunei clothes, weapons, boats, domestic utensils and jewelry were lavishly decorated with or made purely of gold (see Chapter 5.a for early text quotations).
91. The Brunei sources are:
- (i) Lord Stanley of Alderley, *The First Voyage Round the World by Magellan*, London, Hakluyt Society, 1874 (the Pigafetta text); as cited.
  - (ii) Hugh Low, "Selesilah (Book of Descent) of the Rajah of Brunei," *Journ. Straits Branch, Asiatic Society*, 5, 1880: 1-35.
  - (iii) H. R. Hughes-Hallett, "A Sketch of the History of Brunei," *J.M.B.R.A.S.*, 13, 1940: 33-37.
  - (iv) T. and B. Harrisson, "Kota Batu in Brunei," *S.M.J.*, 7, 1956: 283-319.
  - (v) Amin Sweeney, "Silsilah Raja-Raja Brunei," *J.M.B.R.A.S.*, 41, 1968: 1-82.
  - (vi) P. M. Shariffudin, "Brunei Cannon," *B.M.J.*, 1, 1969: 72-93.
  - (vii) T. Harrisson, "Brunei Cannon: their role in South-east Asia," *B.M.J.*, 1, 1969: 94-118.
  - (viii) Cheng Te-K'un, *Archaeology in Sarawak*, Cambridge, 1969.
  - (ix) T. and B. Harrisson, *The Prehistory of Sabah*, Kota Kinabalu (Sabah Society); in press.
  - (x) D. E. Brown, doctoral dissertation at Cornell University, 1969 (a very important background not yet published; used courtesy of Dr. Brown).
92. This and the other two extracts from Brunei folk-lore in this section were collected by T.H. in Brunei Bay during September 1947, and are scheduled for publication in *B.M.J.* shortly. See also Chapter 30 in Part IV following.
93. Chao Ju-Kua, as in Chapter 15.a of our text and at Note 19 above.
94. These texts are richly provided in Emma H. Blair and J. A. Robertson, *The Philippine Islands, 1493-1898*, Taiwan (no date, reprint)--e.g., vol. 4: 149, 162, 178, 182, 183, 218 for 1578-9 A.D.; and see further in Chapter 16.a following.

Chapter 16o Comparisons Further Afield

95. Robert Fox, "Excavations at Catalagan," *Philippine Studies* (Manila), 7, 1959: 321-390. In considering present Philippine gold evidence, looting must be taken to qualify all results (cf. Chapter 15.e)a
96. Leandro and Cecilia Locsin, *Oriental Ceramics Discovered in the Philippines*, Tokyo, 1967, with color illustrationso
97. Locsin, 1967: Plate 5 (cf. previous note); T. Harrisson, "The Golden Hoard of Limbang," *B.M.J.e*, 1, 1969: 57-71, esp. Plate XXXIib. See also AppendixoB for additional Philippine information not available when our main text was completed at Cornell, and based on the fine Manila collection of Dr. Santos.
98. Blair and Robertson, as at Note 94 above here and in the previous 1558 citation; *Volo* 4 of 1903 (original): 179, etc
- 99o Dr. Marschall's important contribution to metallurgy for Indonesia (*in sensu stricto*) has already been cited at Note 8 above, and our gratitude for help on this at Note 15.
- 100o Marschall: 217o
101. E. Schroder, *Nias*, Leiden, 1917, 2 volso
- 102o J. Kreemer, *Atjeh*, Leiden, 1922, 2 volso
103. For multiple uses of bamboo in iron metallurgy and related fields see H.O.: 151, etc.
104. Kreemer as Note 102o
105. Summary from Marschall (cf. Note 15) cf. J. H. Neumann, "De Smid," *Mededeelingen, Nederlandsche Zend . . .*, 47, 1903: 15-20a
- 106o A. van Hasselt, *Volksbeschrijving en Taal. Midden Sumatra*, Leiden, 1881-2, 3 volso (esp. 3: 393 here)o
107. Hasselt, 1882: 185 as in previous Note; W. Marsden, *The History of Sumatra*, London, 1811: 165-172, gives a lucid account in English.
108. G. Rouffaer was a vigorous writer on this subject in Dutch early in this century; here his *De voornaamste industrieen der inlandsche bevolking von Java en Madura*, Hague, 1904: 93, etc

109. T. Pigeaud, *Java in the Fourteenth Century*, Hague, 1962: 496.
110. T. Pigeaud, "Javanese Gold," *Bijdragen* (Hague), 114, 1958: 192-196, at 194.
111. A. Kruyt, *De West-Toradjas op Midden-Celebes* Amsterdam, 1938, 5 vols., at 4: 415-428 here. The same author has written much else to the point since 1900 (see Marschall: 259).
112. On Bali, see Kat Angelina 1922 cited in Marschall; and our further information in Appendix A following. The "small golden leaves" from Salajar are reported by H. E. van Heekeren, *The Bronze-Iron Age of Indonesia*, Hague, 1958: 85; their present whereabouts are unknown.
113. Frits A. Wagner, *Indonesiæ The Art of an Island Group*, New York and London, 1962: 72 ("Art of the World" series). And see Note 117.
114. See further in Part IV following, as also on the related subject of alloy uses to obtain certain color effects values in Asia, and acid to redden gold (Atjeh, Sumatra). Note may also be taken here of Pigafetta's related 1521 A.D. description of Timor as having so much gold in one mountain that the inhabitants could buy all they needed with raw nuggets (Stanley, 1874i 150, cf. Note 91 (i) above).
115. E. Schroder, *Nias* Leiden, 1917; cf. E. Loeb, *Sumatra* Vienna, 1935: 136; cf. Marschall, 1968. We shall return to Nias in connection with gold and the megalithic, where it plays a crucial role (Chapter 26.a, etc.).
116. Paul Wheatley, "Sung Maritime Trade," *J.M.B.R.A.S.*, 32, 1959: 1-140 at p. 133. But his 1960 book, *The Golden Khersonese* claims that this mythic land of promise in effect was the Malay Peninsula, an apparent contradiction. (See further later in this section at section d. following.) For some general comment on the Selinsing, Santubong affinities, see H.O.: 311-312, etc., and see Evans in next note. Also cf. Note 11.
117. D. G. E. Hall, *A History of Southeast Asia*, London (3rd edition), 1968: 79-93 for the best brief general account of Majapahit; I. H. N. Evans, series of Selinsing papers in *Journ. Federated Malay States Museums*, 15, 1930-39: 25-136; particular reference here is to 1932: Plate XXXVII. Mention may also be made here of a magnificent Majapahit royal ornament from East Java illustrated in Wagner, 1959: 116 (cf. Note 113 above).

118. Evans (as in previous note), 1932: 114-117.
119. Alastair Lamb, *Chandi Bukit Batu Pahat*, Singapore; and *Federated Museums Journ.e*, 6, 1961.
- 120i See also Chapter 24 following; and F. E. Treloar, "Chemical Analysis of Some Metal Objects from Chandi Bukit Batu Pahat," *J.M.B.R.A.S.*, 41, 1968: 193-198, which is summarized and discussed in Appendix C to our H.O.: 401-402. A fragment of a small broken gold bead from Santubong has been sent to Dr. Treloar for comparative analysis, to check his view that the headwaters of the Sarawak River behind Santubong were one direct source of minerals found by Dr. Lamb in prehistoric Kedah: gold should be the perfect test case. See also Part III, Note 69.
121. See further discussion in our Chapter 24.d and following.
122. Lunet de Lajonquière, *Bulletin de la Commission Archéologique de l'Indochine*, 1909, 1912; H. G. Quaritch Wales, *Indian Art and Letters*, 9, 1937; Lamb, 1961 as previous note; S. J. O'Connor and Tom Harrisson, "Western Peninsula Thailand and West Sarawak: A Ceramic and Statuary Comparison," *S.M.J.*, 11, July-December 1964: 23-24.
123. For instance, Abraham Hale, "On Mines and Miners in Kinta, Perak," *Journ. Straits Branch, Asiatic Society*, 16, 1885: 303-320; for other references, see H.O.: 368, note 5.
124. Cf. Note 116 above.
125. T. Harrisson in *J.M.B.R.A.S.* 12, 1949: 33-110, esp. at p. 37.
126. See Note 8 above.
127. Cf. Note 11 for background.
128. Section d owes much to Dr. Marschall and to Barbara Harrisson's help in summarizing (cf. Note 15). In this case we have not checked back all the original references, but left them here as from the *Ethnologica* paper, to which the reader is referred (Marschall's bibliography is from pp. 253-263).
129. F. R. Allchin, "Upon the Antiquity and Methods of Gold Working in Ancient India," *Journ. Economic and Social History* 5, 1962.
130. Alexander Rea, "Prehistoric Antiquities in Tinnevely," *Anne Rep. of Archaeological Survey of India*, I, 1902-3: 111-140.

131. As above, p. 121.
132. Alexander Rea, *Catalogue of the Prehistoric Antiquities from Adichannallur and Perumbair*, Madras, 1915: 7 and Plate I.
133. Direct re-examination of the Tinnevely original material (in Madras and Berlin Museums) would be desirable at this stage. See also Appendix A and B on Bali and Philippine parallels.
134. The Limbang "fillet" as at Chapter 15.b previously (and Plate 31a), and in *B.M.J.*, 1, 1969, Plate XXXIc. On megalithic and urn burials see Chapter 17.ċ below. See also Chapter 15.b and Appendices A and B.
135. Alfredo R. Roces, "Philippine Jewelry--Pre-Historic Ornaments," *Esso Silangan* 13, 1968: 18-23, a popular monthly magazine put out by Esso.
136. Quoted by Roces: 22.

### Part III. Megalithic and Micro-Megalithic

#### Chapter 17. Megalithic Cultures in Historical West Borneo

1. The need to re-survey the megalithic scene in Borneo is particularly strong because it has hitherto been barely or not at all recognized in its real importance. Thus the principal relevant work of reference devotes many pages to "megalithic cultures" in the area, but concludes: "Borneo despite its size, this island contains very few megalithic antiquities" (H. E. van Heekeren, *The Bronze-Iron Age of Indonesia*, Hague, 1958: 63). Like other authorities, this one does not mention anything significant. See also Part II, Note 112.
2. Webster's *New Collegiate Dictionary*, 1965: 527.
3. Dusun was long accepted as the common term for the inland pagan population of northernmost Borneo; and is still so used in ethnographic literature. Kadazan previously applied only to a small but highly educated, Christianized group near Kota Kinabalu (then Jesselton), the capital of Sabah. These were the first politically conscious non-Moslems; objecting to the term Dusun (lit. "gardener"), they proposed Kadazan as the acceptable alternative.

4. The Kedazan megalithic was first recognized by Barbara Harrisson in 1962, subsequently studied in detail by T.H. with major help from Mr. Michael Chong of the Sabah Museum and active support from Mr. E. J. H. Berwick C.B.E., first Curator of that fledgling institution.
5. The only previous report of any kind in this striking Kadazan assemblage of menhirs is an illustrated article by T.H., "The Stone Lovers," in *Straits Times Annual for 1969* (Singapore): 105-106. Part of the reason for the previous neglect of these megaliths is that they were scattered over wet-padi fields, difficult to walk in. The new road system out from the capital opened up these wide villages and revealed their beauties to anyone with a bus fare.
6. *Sawah* is the common word for irrigated wet-padi rice land in Southeast Asia; the alternative, dry slash-and-burn fields (swiddens) are in Borneo usually called *ladange*. And see Chapter 31 (v)i.
7. The main aerial study was made in a "Cessna" plane on February 18, 1966 by T.H. with E. J. H. Berwick (cf. Note 4). It is not thought that the survey was complete. Other standing menhirs certainly remain unidentified, as well as many fallen, broken, and otherwise disturbed ones. The present total of 133 can only be a fraction of the past total within a few miles radius of Kota Kinabalu.
8. Krakatoa erupted so dramatically in 1883-4, when the effects were felt throughout the archipelago. Anyone remembering it regularly claims to be 100 in Borneo; though ninety would be quite plausible. Even so, such claimants are very rare under conditions which have not favored longevity in the past. Malanggom is probably in fact about 92.
9. As these figures are now safely in the Sabah Museum they can be more exactly studied than was possible in the field--and we hope someone will do this presently. Their removal was initiated when Mr. Berwick was the first Curator (1963-4) and involved considerable negotiations--as the whole community felt implicated, while admitting Lajumin's personal property right. In the end the transfer was agreed against payment of a water-buffalo, a pig and a chicken (together worth \$230) and \$50 in cash--provided concrete replicas were put up to replace the figures in exactly the same positions. This offer was accepted and the wooden originals were taken to Kota Kinabalu in November 1965. The Public Works Department there made first exact wooden replicas, then concrete cast copies for erection back in the fields. The results, now to be seen in the Sabah Museum and back on the rice-fields, do great credit to craftsman Charles Jonioh and foreman Ho Cheu Hwei, working under mechanical engineer M. J. Leonard.

10. Some of G. C. Woolley's photographs are now in the Sabah Museum, along with his diaries; an important archive.
11. This makes the salvaged specimens all the more important; cfi Note 8.
12. Hiram J. Woodward, Jr. has kindly let us see and refer to his 1968 graduate student paper on the megalithic for Professor Chang at Yale. The references he cites in the extract quoted here are, in sequence:
  - (i) T. Harrisson, "A Living Megalithic in Upland Borneo," *S.M.J.e*, 8, 1958: 694-702.
  - (ii) Christoph von Fürer Haimendorf, "The Megalithic Culture of Assam," in F. M. Schnitger, *Forgotten Kingdoms in Sumatra*, Leiden, 1939: 215-222i
  - (iii) T. Bloch, "Conservation in Assam," *A.S.I.A.K.e*, 1906-7: 17-28.
  - (iv) C. W. Hutchinson, "Megaliths in Bayab," *Journal Siam Society*, 331, 1954 (reprint from *S.M.J.*, 2: 78-83).
  - (v) Chin You-di, "*Hin Yai*" (= "Megaliths"), Bangkok, 1965 (in Thai) (Mr. Chin You-di is an archaeologist and Director of the Bangkok Museum.)
13. I. H. N. Evans, *The Religion of the Tempasuk Dusuns of North Borneo*, Cambridge, 1953i 149-154, etc. This is a rich source book (cf. iron relevance in H.D.i: 77-84 and 213).
14. H. G. Keith, "Megalithic Remains in North Borneo," *J.M.B.R.A.e* 22, 1947: 153-155; and T. Harrisson, "Ethnological Notes on the Muruts of the Sapulut River," *J.M.B.R.A.S.e*, 40, 1967: 111-129.
15. W. Münsterberger, *Ethnologische Studien au Indonesischen Scöpfungsmythen*, Hague, 1939: 167-173; which goes into Dusun material in some detail but considerable confusion. He wrote of course, before Evans' big work (Note 13) or discovery of the Kota Kinabalu megalithic now.
16. David Sopher, *The Sea Nomads*, Singapore (National Museum), 1964, for background.
17. See Part II, Note 3, previously. In January, 1970, Barbara Harrisson found traces of the Usukan type cemetery further north on Benggin Island (Appendix C).

18. A. J. Bernet-Kempers, "Archaeological Activities in Indonesia, 1948-1953," *Annual Bibliography of Indian Archaeology*, 16, 1958; H. E. van Heekeren, 1958 (as at Note 1 above) at his p. 63.
19. This subsection is largely derived from a revised version of T. Harrisson, "Borneo Death," in *Bijdragen* (Hague), 1962, 118: 1-91. This remarkable range of megalithic and related or equivalent activities on the tiny upland area involved indicates the elasticity and dynamism of what at first sight looks a straight "megalithic culture." For our present theme, item number 14 is of interest, and is detailed further at section e. The special records at items number 17 and 19 are both reported in T.H.'s "A Living Megalithic in Upland Borneo," *S.M.J.*, 8, 1958: Plates 19a and 18b, respectively. A series of other papers are in *S.M.J.* and *Geographical Journal*, 1949-69.
20. Nowhere in Borneo has there been any proven link between megalithic and neolithic (stone age) activities, despite extensive excavation in the Kelabit uplands and elsewhere, as well as Jaong.
21. T. Harrisson, *World Within* London, 1959: 114. Part I of that book deals generally with the whole of Kelabit culture, including an account of the status feasts of merit essentially linked with and capped by megalithic efforts of all kinds.
22. It is also not too easy to accept the rather sharp distinction drawn by Dr. Heine-Geldern and widely accepted since (e.g., by Dr. H. van Heekeren, Note 1 above), between clay urn burials and megalithic (stone urns, etc.). See also the last sentences of our Part II main text and Note 134 there, as well as Note 84 below.
23. This table is slightly revised from T. Harrisson, "Inside Borneo," *Geographic Journal*, 130, 1964: 331-, one of a series of papers on the interior in the Royal Geographical Society's quarterly from 1949, often dealing with megalithic aspects.
24. *World Within* 1959 (see Note 21): 111-112.
25. Benedict Sandin, *The Sea Dayaks of Sarawak before Brooke Rule* London, 1968; and Robert Pringle's book on the same people during Brooke rule, based on his 1968 doctoral thesis at Cornell, now in press (with Macmillan's, London).
26. T. Harrisson, "The Serus and Four Stone Figures from Sarawak," *Bulletin Raffles Museum*, Series B, 4, 1949: 117-122. This is the only paper published on these people so far.

27i Helmut Loofs, 1967, see previously in Prefacei

Chapter 18. Batu Gambar and Sungei Jaong's  
Petroglyphic Boulders

- 28i This summary is developed and modified from the brief treatment of Jaong petroglyphs in the previous delta monograph (H.O.i 277)i This is the first comprehensive account of this material, first studied in the field in 1952i We refer the reader to the photographed and drawn Plates as essential data. Until new and comparative information is available we must rely largely on these to make our points.
29. H. van Heekerenj 1958: 61 (see Note 7 above); cf. our Chapter 17.e for another Celebes parallel. In excavations of Sabah Caves for the Sabah Museum, T. and B. Harrison have found significant earthenware pottery, stone and metal tool parallels between northern Borneo and Celebes (*The Pre-history of Sabah*, Sabah Society Special Monograph, in press)i

Chapter 19i The Jaong Pebble-Beds (and Gold Again)

30. L. V. Helms, *Pioneering in the Far East*, London, 1882: 153. Helms was one of the originators of the Borneo Company and other early economic enterprises in the area; several of which centered on the Sarawak River delta (notably the extraction of cutch)i It is on the whole probable that he here describes something encountered in this sector, looking for goldi
31. But the more random distribution in places is reminiscent of the scatter patterns in iron slag, described under the heading, "The Magic Iron" in H.O.i 75-84i
32. This report is written in the U.S. without daily access to the detailed workbooks and sketches in the Sarawak Museumi Any minor descriptive deficiencies may perhaps be forgiven on that accounti The Sarawak Government regards these records as their exclusive property at this time.
33. Cf. H.O.: 239 and Chapter 24.a following. The complexities and variations in delta sites are fully discussed throughout H.O.

## Chapter 20. Touchstones

- 34o Joseph Needham, *Science and Civilisation in China*, Cambridge, 1959, vol. 3: 672, etc.; and R. J. Forbes, *Studies in Ancient Technology*, Leiden, 1964, vol. 8: 171; plus T.H., personal observations, 1945-69.
- 35o Small sharpening stones used for steel knives widely in Borneo are often visually close to touchstones, especially the very hard *Batu Berani* (lito "Brave Stone") of the Iban Sea Dayakso This is of a very fine-grained dark sandstone used for sharpening the spurs of fighting cocks; particularly found in the gravel-beds of the Upper Temburong in Brunei, where tektites are also found. In Bali in February 1970o T.H. was given, by the Sura Gold Works Shop at Denpasar, a beautiful 4 inch by 2 inch piece of dark jasper with veins and whorls, carefully squared on the edge and with one corner heavily worn by touchstone use. This large shop used this and a similar piece for all everyday test purposes, and said that such was still the common practice throughout Bali, where gold-smithing now experiences a new revival with the sharp rise in touristso
36. Despite the use of touchstone and other tests outlined in this chapter, Borneo people remain remarkably naif about gold values at this time, as instanced in this item from the *Borneo Bulletin* (weekly) of January 17, 1970:

### "oCHEAP GOLDo CHEAT

"SIBU - Police have arrested a man on suspicion of cheating an old farmer from Sarikei of \$13,000 at Igan by selling him 'cheap smuggled gold.o"

## Chapter 21. Stoneware Vessels and Pebble-Beds in Jaong

37. On the whole porcelain from Jaong, see T. Harrison, "Some Ceramics Excavated in Borneo," in *Trans. Oriental Ceramic Society*, 1953, 28: 11-21; with color plate which is also produced as frontispiece to *S.M.J.*, 1957, 8. For a more general review see T.H.'s paper, "Export Wares Found in West Borneo," in *Oriental Art*, 1959, 5: 1-12. These publications have been drawn upon, along with other papers published in *S.M.J.*, for this chapter. All these vessels are in the Sarawak Museum (see also Note 41)o
38. This and a following extract from early field reports are from an interim report prepared with Mr. Cheng Boon Kong, then Research Assistant in Sarawak, now alas a resident of Singapore, in 1952 at Jaong.

39. See also the list in Chapter 8 previously; and for the metal-ceramic relationships at Chapter 22.a following, as also in H.D.: 229.
40. For our formula on this way of expressing artifactual and other material in an open-site deposit see H.O.: 34. The eight 1966 pieces are listed further in section b of this chapter.
41. Cheng Te-K'un, *Archaeology in Sarawak* Cambridge, 1969: Plates 9-10. Dr. Cheng illustrated 21 T'ang and Sung stonewares excavated from Jaong, Bongkizam and Buah.
42. T.H. in *Oriental Art*, 1959; see Note 37.
43. This curious water-dropper is discussed and illustrated in *S.M.J.*, 8, 1957: 101-102 with Plate IX.
44. One fish-shaped and sealed jar from Jaong is illustrated in T. Harriison, "Ceramic Crayfish and Related Vessels in Borneo," *S.M.J.*, 15, 1967: Plate VI, and on a smaller scale by Cheng's Plate 9f, where he likens it to others reported by R. L. Hobson, *Catalogue of the Eumorfopolous Collection*, 1, Plate 56, 401; and S. Okuda, *Annam Toji Zukan*, Plate 4 (cf. Note 41 above).
45. For Tanjong Kubor see Chapter 1 previously. This spouted vessel is illustrated at *S.M.J.*, 8, 1952: 33.
46. Other pebble-bed functions are perfectly possible, too. Since this was written, we have watched people building up pebble-beds by placing pebbles singly, as personal or family acts of tribute at Buddhist temples for Japanese New Year Rites round Kyoto, for example. And in the terraced temples of Bali (to be mentioned further in Chapters 24 and 26b following) pebbles are frequently so placed in shrines and elsewhere in temples during Hindu Animist festival rites; cf. Appendix A.
47. See also the general discussion of Chinese stoneware and contact in H.D.: 262-276.
48. Dr. Cheng's Sinophilish approach see Part I, Note 1; also our Chapter 16.d; Dr. Marschall, Part II, Notes 8, 15 and 99. Edward H. Schafer has added powerfully to the argument by insisting that there was equivalent gold-link between China and the Indies *early on*. He illustrates rich gold usage and says:

"Such was gold in the T'ang. But internal production did not meet the needs of the people, and

the gold of Asia poured in over the frontiers. . . ."

Then he goes on to examine sources and concludes i

"What is surprising in all this welter of gold is that we hear nothing of gold brought to China from the Indies. Somewhere in Malaya was Suvarṇadvīpa, the island or continent of gold, an almost fabulous El Dorado for the peoples of India. But the tradition . . . was absent from China."

*The Golden Peaches of Samarkand*, Berkeley, 1963: 254.

49. Forbes, 1964, 8: 76 (see Note 34 above, cf. Part II, Note 1)

## Chapter 22. Other Jaong Pebble-Bed Associations

50. See Note 38 above.
51. Cf. H.O.: 77, and the very thorough analysis of slag in the 470 pages of the H.O. study generally.
52. Cf. Note 39 above.
53. These percentage data were not included in the previous H.O. monograph.
54. The relevant glass bead literature and data for Borneo was last reviewed by T.H. in *Man*, 64, 1964: 50; cf. Alastair Lamb, *Man*, 65, 1965: 30. For ethnic background see *S.M.J.*, 5, 1950: 1-22. Other papers in press.
55. W. G. Solheim in *S.M.J.*, 13, 1965: 1-62. Sherds of largely "local ware" occur in great numbers in all other sites, including Jaong. But at this stage, pending the exhaustive separate study required, any generalizations on them--or even lumping them all together under one heading--must be taken with special caution, even by the nervous standards of this Data Paper (and cf. H.O.: 140). As with slag, the general scatter-pattern of earthenware is confused by iron working and other, including later, disturbance. Owing to the heavy wear and tear on these softer pots, they are also much more difficult to identify, classify and reconstruct than are the hard stonewares.

Chapter 23. The Micro-Megalithic Idea

56. This is a tentative formulation. We are now testing out the approach outside Borneo--so far with some success in the field. We plan two joint papers to extend the present treatment during 1970-1.
57. Nias detailed in Chapter 26.b (cf. earlier Chapter 16.b)i
58. "Megaliths" already defined as in the first paragraph of Chapter 17. See also Note 2 above.

Chapter 24. The Bongkizam Shrine in the Micro-Megalithic Mood

59. In section d of this Chapter (only) references are given in the text rather than in these notes, where these occur in concentrations.
60. H. L. Shorto, "Dewatu Sotapan: a Môn Prototype of the 37 Nats," *Bulletin School Oriental and African Studies*, 30, 1967: 1.
61. Cf. the manhirs associated with irrigation in Sabah (Chapter 17.a) and in northern Luzon (26.a), and the close rice-irrigation and megalithic linkage in the Kelabit uplands (17.c); also Chapter 25, fourth paragraph and Chapter 31 (v).
62. F. Mus, "Cults Indiens et indigenes au Champa," *Bulletin de l'Ecole Francaise d'Extreme-Orient*, 33, 1933: 1.
63. Part of the following discussion was published by the authors in *S.M.J.*, 15, 1967: 210-222. Our interpretation of the significance of the shrine has been mildly revised and considerably extended as a result of our study of the whole related Jaong megalithic complex and other research involved in the preparation of this Data Paper during August-December, 1969.
64. Using this term as previously defined by S. J. O'Connor in *Artibus Asiae*, 36, 1966: 53-60. The object in question was illustrated in *S.M.J.*, 15, 1967: Plates XXXVIII and XXXIX and in Cheng, *Archaeology in Sarawak*, 1969: Plate 5.
65. The letters and numbers associated with the gold objects refer to the inventory located in the Gold section of this report, at II.7.b.
66. Lunet de Lajonquière, *Bulletin de la Commission Archéologique de l'Indo-chine*, 1909.

67. A. Daneilouj *Hindu Polytheism* London, 1964: 215; A. Getty, *The Gods of Northern Buddhism*, Rutland, Vermont, 1962: 69.
68. A. Bernet Kempersj *Ancient Indonesian Art*, Hague, 1959: Plate 180. Compare also the finer yet still simple work on the pieces from Chandi Bukit Batu Pahat in Perak, Malaysia (Chapter 16.ĭ previously).
69. F. E. Treloarij in *J.M.B.R.A.S.e*, 41, 1968: 193; cf. details in Part II, Note 120; also H.O.: 401.
70. W. G. Solheim in *S.M.J.e*, 12, 1965: 1-100; cf. H.O.: 141; and further in *Asian Perspectives* (in press; T.H.). The absence of stoneware porcelain sherds directly associated with the platform and shaft may be negatively significant. For the overlay of Sung sherds, see section d in this chapter.
71. Procedure here as defined in Note 59 above--for section d only.
72. We shall return to this and other aspects in suggesting parallels with Java-Bali terraced sanctuaries in Chapter 26.b.
73. Section e is a revised and updated version of extracts from T.H.'s earlier "Gold and Indian Influences in West Borneo," *J.M.B.R.A.S.e* 12; 1949: 33-110.
74. O. W. Wolters, *Early Indonesian Commerce*, Ithaca (Cornell), 1967; T. Harrissonj *The Malays of South-west Sarawak before Malaysia*, London, 1970.
75. All quotations and information for section f here from T.H. work to be published in *B.M.J.e*, 1970-1; cf. Harrisson, 1970 (as in Note 74) at pp. 117-122.

#### Chapter 25. West Borneo's Megalithic in Southeast Asia

76. H. H. E. Loofs, *Elements of the Megalithic Complex in Southeast Asia: An Annotated Bibliography*, Australian National University Press, Canberra; Oriental Monograph series, 1963; 1967. See Preface to this Data Paper. Further references to Loofs are to this 114 page monograph, except as at Note 82. The *italicized* numbers used in these cases refer to the titles listed by him in the bibliography and NOT to the pages (which, if cited, are not italicized).
77. Münsterberger and Evansj as Sabah sources; see Notes 13 and 15 above.

78. See Note 61 above (and also Chapter 2). The Laos literature owes everything to Madeleine Colani, notably her great *Megalithes du Haut-Laos* Paris, 1935, 2 vols. (from *E.F.E.O.*, Vols. 35-36). Of the 21 papers listed in Dr. Loofst bibliography for Laos, 14 are by Madame Colani (Loofs: 134-147).
79. T. Harrisson, "Megaliths of Central Borneo and Western Malaya compared," *S.M.J.e*, 10, 1962; 376-383t
80. A. N. J. T. T. van der Hoop, *Megalithic Remains in South Sumatra* Zutphen, 1932, finely illustrated re-examination of work previously considered "Hindu" and shown to be pre-Hindu from "the beginning of the Christian era" (cft Loofs, 253).
81. N. J. Krom, *Inleiding tot de Hindoe-Javaansche Kunst*, Hague, 1923: 3 vols.; the cited passage is from Loofst excellent summary (Loofs: 386); see also our Appendix A (Bali).
82. H. H. E. Loofst, "Some Remarks on Philippine Megaliths," *Asian Studies* 3, 1965: 392-402 (his italics). And see further at Chapter 26.a following. The references cited in Loofst paragraph are covered by his items no. 527 and 530. Eggan saw Polynesian affinities in the Luzon mountain stonework and T.H. was tempted to feel likewise when visiting Tahiti and Fiji recently, mountain Luzon and Bali previously.
83. H. D. Collings in *Bulletin Raffles Museum* Series B, 1, 1937: 75-93; Michael Tweedie, *Prehistoric Malaya*, Singapore, 1957. Colani as in Note 78; van der Hoop, Note 80.
84. Loofs, p. vi; cf. on Heine-Geldern also his items 13, 14, 15. The distinction between stone use and clay urns is too rigid here; cf. the Kelabit use of earthenware vessels, stoneware jars and stone urns as three of many aspects in their megalithic procedures (Chapter 17.c). Also Note 22 above and next below.
85. H. E. van Heekeren, 1958: 55. The only Korn item in Loofs is his no. 256, which refers to a popular article in the Sumatran megalithic (1941). See also van Heekeren's own article on Balinese sarcophagi in *Berita Dinas Purbakala*, 2, 1955: 1-15, from which Heine-Geldern linked those coffins to others in Colombia, South America (Loofs, 419). Where sarcophagi on Bali have any contents, there is always metal included, and one examined *in situ* by T.H. contained traces of bronze. The extensive recent studies of R. P. Soejono--now unfortunately transferred to

Java--show origins in the metal age, continuation into historical times (48 sarcophagi studied, see *Asian Perspectives*, 6, 1962: 38-39; cf. Loofs: 424-5). Incidentally, van Heekeren's book omits megalithic reference to Sumba, Flores and Timor and leaves the Nias megalithic entirely "to the ethnologists."

86. Frits A. Wagner, *Indonesia: The Art of an Island Group*, New York and London, 1962: 23.
87. Each region is thus arranged and treated in the same sequence here as in Chapter 16, for gold.
88. H. O. Beyer, "Origin and History of Philippine Rice Terraces," *Proc. 8th Pacific Science Congress*, 1, 1955: 388; cf. Loofs: 529.
89. Beyer (as above): 391.
90. Loofs, 1965 (see Note 82): 397-401.
91. Douglas Osborne, *The Archaeology of the Palau Islands* Hawaii (Bernice Bishop Museum), 1966: 443, etc.--an exhaustive report; Isadore Dyen, "A Lexostatistical Classification of Malayopolynesian Language," *Language* 38, 1962: 38-46 and other papers by the same author; W. H. Scott, *Prehispanic Source Materials for the Study of Philippine History*, Manila, 1968: 50, an important little book.
92. Loofs: 210-526 for the scale of the relevant literature.
93. E. E. W. G. Schroder, *Nias Ethnographische, Geographische, en Historische Aanteekeningen en Studien* I, Leiden, 1917
94. The footprint idea is profoundly intermixed in many megalithic concepts of the area, as also of course Thai and other Buddhism.
95. Peter Suzuki, *The Religious System and Culture of Nias*, Hague, 1959: 99; and the following quoted extracts from his pp. 100, 105, 111 and 115 respectively.
96. Münsterberger, 1939, see Note 15 above. See also Loofs: 337-8, summarizing his 1940 paper on Nias parallels with Polynesia.
97. Van Heekeren, 1958: 53; rows of cupmarks on the "face" of upright menhirs serving as seat-backs occur in the Gelgel district of Bali too (cf. T.H. photograph, Plate 58 here).

The "holes" worked into the rock faces at Jaong, and perhaps also the "block cuts" there, may be considered as relationso

98. Van Heekeren, 1958: 69; incidentally, Loofs has an excellent index of authors and a good but incomplete one for subjects, which should not be taken as a sole guide to his rich content. For instance, of the following item numbers in his bibliography are by his own annotations relevant to terracing but not terraced indexed: 253, 364, 368, 370, 386, 395, 407, 416, 442--as well as those he includeso 14, 95, 111, 378, 385, 396, 401, 529 and 535. See also van Heekeren: 53-54.
99. F. M. Schnitger, "Les Terrasses megalithiques de Java," *Revue des Arts Asiatiques*, 13, 1939-42: 101-114.
100. A. J. Bernet-Kempers, *Ancient Indoæesian Art*, Hague, 1959: 103 and Plate 334; W. F. Stutterheim, "An Ancient Javanese Bhima Cult," in *Studies in Indonesian Archaeology*, Hague, 1956: 107-143. In another report, Stutterheim found around the shrines high on the slopes of Mount Penanggungan in Eastern Java, thousands of potsherds. Although most were of local earthenware, there were also large quantities of high-fired Chinese ceramics. The generally megalithic character of these shrines, the fact that at least one of the shrines contains a relief showing a sacred figure *forging iron*, and the ceremonial scattering of potsherds, all bear analogy with Santubong. See W. F. Stutterheim, "The Exploration of Mount Penanggungan," *Annual Bibliography of Indian Archaeology for the Year 1936*, 11: 25-30. This author also significantly links the Indonesian use of stone *chips* with the Hindu *lingga* as an ancestor receptacle (cf. Loofs: 229; also 401, 404, 406-9). All our own remarks on Java parallels can at least equally be applied for Bali (cf. Appendix A)
101. Hoop, 1932 (see Note 80 above): 142, etc.
102. F. M. Schnitger, *Forgotten Kingdoms in Sumatra*, Leiden, 1939: 170o
- 103o G. P. Rouffaer, *Ethnographie van de Kleine Soenda Eilander in beeld*, Hague, 1937o Judging from his largely unexplained pictures, a major field for research exploration--at Nias level--remains in these less accessible islandso Notice here especially the loose stones in association with large menhirs (his Plate 14); the well-made walls of unworked pebble and stone with elaborate groups of menhirs; interchangeable stone "tables" and "seats" (16, 25, 26, 48, 50), impressive pavements of natural stone (20, 48, 50-54) often on Flores and Sumatra community centers as

in Nias and Luzon (28, etc.); all these and many more com within our micro-megalithic concept, less or more.

104. A. Lamb, "Excavation and Reconstruction of Chandi Bukit Batu Pahat, Central Kedah," *Federation Museums Journal* 5, 1960: 1-108; cf. our Chapter 16.c.
105. See Chapter 2; cfi Note 78 above
106. R. Baradat in *B.E.F.E.O.*, 41, 1941: 54.
107. L. Cadiere in *B.E.F.E.O.e*, 19, 1919: 1-115; and in *Bull. de l'Institut indochinois par l'Etude de l'Homme* 6, 1943 257-260.
108. H. Siiger, *Actes de IVe Congrès International des Science Anthropologiques et Ethnologiques, Vienne, 1952, Vienna, 1955: 185-189.*

