

The Consequences of Cook's Hawaiian Contacts on the Local Population

by

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The arrival of Captain Cook in Hawaiian waters in 1778 initiated a new and, for the Hawaiians, a calamitous phase in their demographic history: this is beyond dispute. From an insecurely estimated population of c.250,000 Hawaiians in 1778, the population, even of some Hawaiian ancestry, fell to c.84,000 by 1850 and to its nadir of c.37,500 in 1900.

How much of the blame for this tragic episode can be assigned directly to the effect of Cook's contacts with the Hawaiians in 1778-9 and how much was inevitable given the subsequent explosion of interest and contact in the Pacific which Cook's discovery detonated, is a matter about which some controversy may persist. But several writers, including the Hawaiian historian Kamakau, have held Cook culpable (Kamakau, 1961, Ch. VIII, pp. 92-104). As a consequence, Cook's name is held by some in Hawaii in a disrepute not encountered elsewhere in the Pacific region which he explored.

The journals and other writings which resulted from the two Cook visits refer to the problem of venereal diseases among the crews, to the possibility of their transmission from the newcomers to the Hawaiian population and to the possibility of their previous presence.

The aim of this paper will be to test the accuracy and probabilities involved in Cook's perception of his expedition's role in this process, but in the light of modern hindsight.

Unfortunately, the Cook accounts follow the custom of the time in being very vague in most cases about which of the two major venereal diseases is being referred to. Cook wrote in a scientific climate in which, although there was great alarm about the prevalence and destructiveness of the venereal diseases, there was still great ignorance about them. Twenty years before Cook landed in Hawaii, Hunter, an influential medical researcher "proved", at least to his own satisfaction, that syphilis and gonorrhoea were one and the same. Syphilis and gonorrhoea were not scientifically "separated" again until 1837, sixty years after Cook was writing. Scientific acceptance of the "germ theory" was still ahead in time an even further distance. Nevertheless those most exposed to such diseases, and we must include here the sort of people Cook is likely to have recruited as a crew, had a vernacular appreciation of the two, and their terms, "clap" for gonorrhoea, and "pox" for syphilis separate them quite efficiently.

It is often, but not always, possible from the incidental descriptions of the symptoms, to decide which is being discussed. To make the distinction between the two is extremely important from a demographic point of view because their effects are very different. Of the two, gonorrhoea probably is the more destructive because of its capacity to cause sterility, particularly in females but also in males. Its effect on mortality is negligible. There have been documented some modern cases of widespread gonorrhoea associated with low fertility, being carefully observed in the Pacific Islands (Scragg 1954 and Pirie 1972). In the literature, because of its apparently milder and shorter effect upon the individual, gonorrhoea is often taken quite lightly.

Syphilis by contrast is, in its later stages, an obvious and "loathsome" disease and is described in suitably horror-struck terms by most writers who observe it, including those documenting Cook's voyages. Its demographic effect is much less however; while it does shorten life, the slow deterioration involved may take two or three decades and, given the mortality characteristic of the time, many other causes of death could supervene. It also causes spontaneous abortion and reduces the survival of children from congenital causes but has little direct effect upon fertility as such.

There is one complication about the introduction and dispersal of syphilis into the Pacific which is too little appreciated and which has particular importance to its effect in the Hawaiian group. This is its association with yaws (treponema pertenue) as one of the group of four diseases known as treponematoses. There is no need here to become involved in the Hudson controversy over whether these diseases are actually caused by an identical organism, and whether the differences among them are better explained by environmental variation than by organic differences (Hudson, 1965). It must be observed however that (a) the prevalence of yaws, especially among the very young, will render a population largely immune from infection by venereal syphilis and (b) that the distribution of yaws is related to a specific climate, the humid tropical forest type, and that lower temperatures and increasing aridity will limit its occurrence. A well distributed annual rainfall, of less than 1650 mm (65"), and one or more mean monthly temperatures falling below 18°C (65°F) seem to set the lower limits of a yaws-specific environment. In the Köppen climate classification the occurrence of yaws is generally coterminous with the Af climates or the tropical rainforest type (Fig. 1). The Hawaiian chain lies outside this regional climatic type in the Pacific, but the effect of

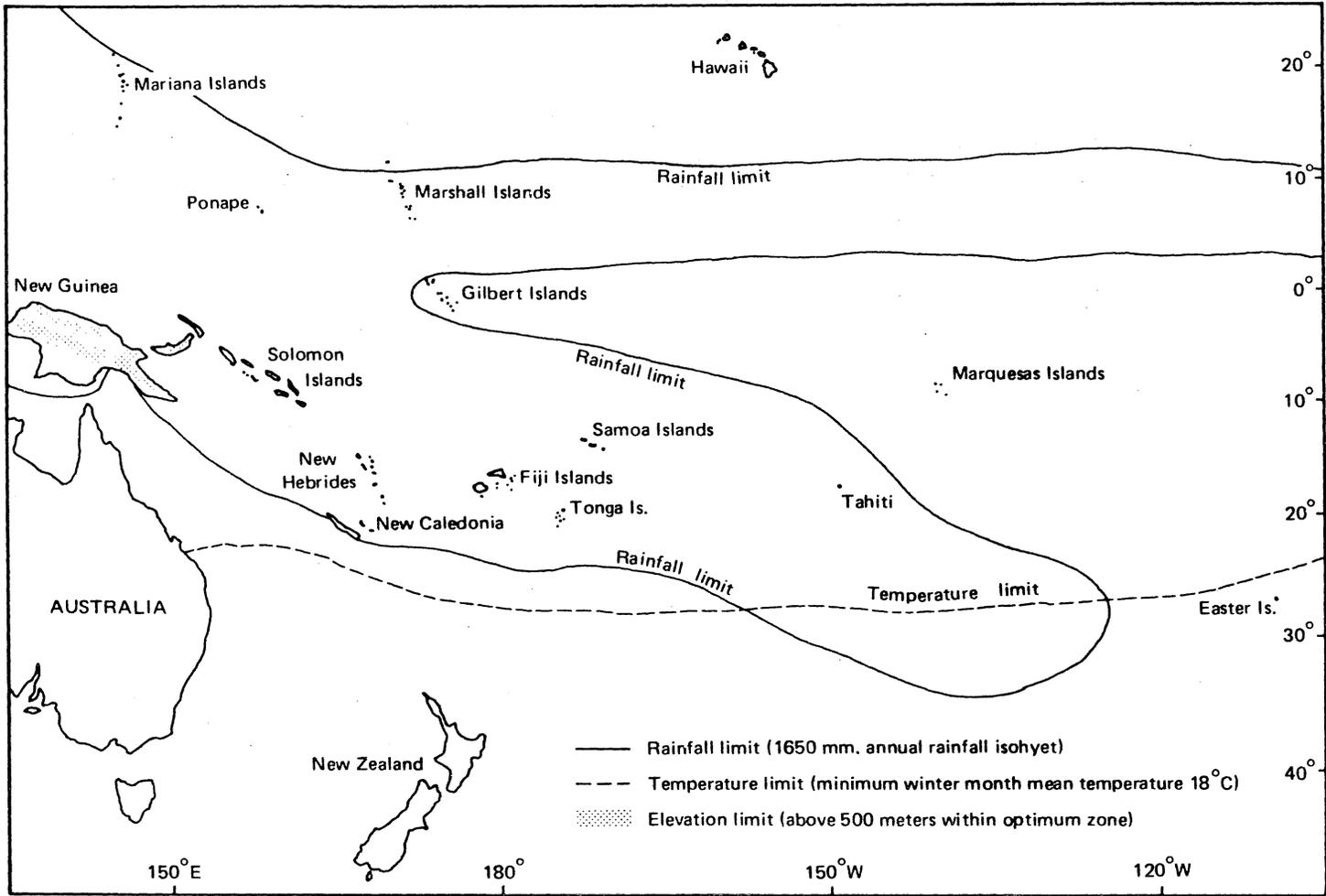


Figure 1 The Optimum Zone for Yaws in the Pacific Islands

orographic rainfall, mainly associated with the tradewinds and the prevalence of mountainous interiors brings a high rainfall tropical forest climate to much of the archipelago and Af climates are recorded in many locations.

The presence of yaws in Hawaii is still a matter of some dispute. The probability is high that it would have been introduced by the earliest Polynesian settlers from the Marquesas and the Society Islands, where its prevalence has been well established, in a process of oceanic diffusion which had its beginnings in Southeast Asia. On the windward coasts of the Hawaiian chain, the climates are certainly hot and humid enough for yaws to thrive. The leeward coasts, because of low and erratic rainfall, would provide less than optimum conditions. The exception to this generalization occurs on the Kona Coast where, because of a prevalence of convectional rainfall, induced by on-shore breezes developing in the lee of Mauna Loa, particularly in the afternoon hours, this "leeward" coast has a high rainfall and a distinctly humid tropical climate which would be very hospitable to yaws. Most of the lowland areas on the island of Hawaii, traditionally cited as the first island to be inhabited, would have provided conditions which would have allowed yaws, once introduced, to become endemic.

There is a possibility that, by chance, none of the canoe crews carried yaws and that the Hawaiian Islands escaped this tropical scourge. But there are several references, listed in Van der Sluis (1969), to symptoms observed among Hawaiians in the late 18th and early 19th centuries which indicate the presence of yaws, although often confused at the time with venereal syphilis, and the name "pupu" is associated with this condition.¹

¹Recorded as pupu in various spelling variants, by these observers, the word in Hawaiian is pu'upu'u -- to break out in lumps or blisters. (Andrews, 1865).

Scott, a surgeon on the "Talbot" visiting Hawaii in 1844-5 notes, "The most common and obstinate [disease] termed pupu in their language, is a vesicular and prurient eruption, which is a species of eczema, and appears analogous to the tona of the Society Isles, it is often aggravated by constitutional causes, and is sometimes followed by ulcers difficult to heal.² The inhabitants do not consider it contagious" (quoted Van der Sluis, 1969, p.119).

George Bennett (1832) another doctor writing on the practice of medicine among several Polynesian groups identifies pupu in Hawaii and also identifies it with the tona of Tongatabu (Van der Sluis, 1969, p. 118). F.D. Bennett (1840) observes, "Diseases of the skin are rather prevalent amongst them; especially one form, named pupu by the natives, and considered a variety of the itch by Europeans -- its contagious character however, may be very fairly questioned. It occurs as a vesicular and very prurient eruption; and in its worst form, is followed by ulcers which are very difficult to heal. It is analogous to the Tona of the Society and other Polynesian islands."

The Wilkes Expedition records also note "a somewhat similar disease to that which we have observed in other Polynesian islands, exists here [in Hawaii] under the name of poupou; but it is by no means so violent nor did we see any cases of so disgusting a character as those heretofore described: it is very much confined to the young" (Wilkes, 1838-42, Vol. IV, p. 305).

²tona is the term still in use in Polynesia for yaws, e.g. in Tongan, Samoan, and Tahitian. Another word, oovi (Tahitian) or kovi (Marquesan) is sometimes used for yaws in its later carious stage. The word seems to have been applied later to leprosy when it was introduced in the middle of the 19th century. (Van der Sluis, 1969, pp. 80-83).

The descriptions generally point to yaws, and the precise identification of "pupu" with tona by observers familiar with both in the Pacific islands is convincing indication that yaws was present in Hawaii before Cook's arrival, and that it persisted well into the 19th century. That it was sometimes confused with venereal syphilis is suggested by the following account which, although ostensibly of syphilis, is more likely, given the location, the non-venereal acquisition and the youth of some of the patients, to be endemic yaws.

"At Karakaooa [Kealakekua] we visited several most wretched objects; the bones of the palate, orbit, or extremities were in a state of extensive carious disease and we were requested by three individuals to perform amputations thinking it might lessen their sufferings. The venereal poison is frequently absorbed and carried into the system without any abrasion or sore appearing on the genitals! In many instances it must have been hereditary, judging from the advanced state of the disease compared to the youth of the individuals suffering." (Gunn, 1841-2).

If yaws was in fact endemic in the climatically suitable areas of the Hawaiian chain, the young people growing up in a yaws-infested environment would have acquired substantial immunity to venereal infection from syphilis. Conversely, those whose childhoods were spent in climates inhospitable to yaws, such as the semi-arid areas of the leeward coasts, would have been vulnerable to syphilitic infections derived from visiting seafarers.

Cook's first landfall in the Hawaiian group on the 18th January 1778 was Kauai; contact in the area was confined to the Waimea area on the leeward coast of Kauai and to Niihau. Climatically this is a semi-arid area, with a rainfall averaging less than 30" for the most part, and, in Köppen terms, a BS climate, (Figure 2). It is consequently a very hostile

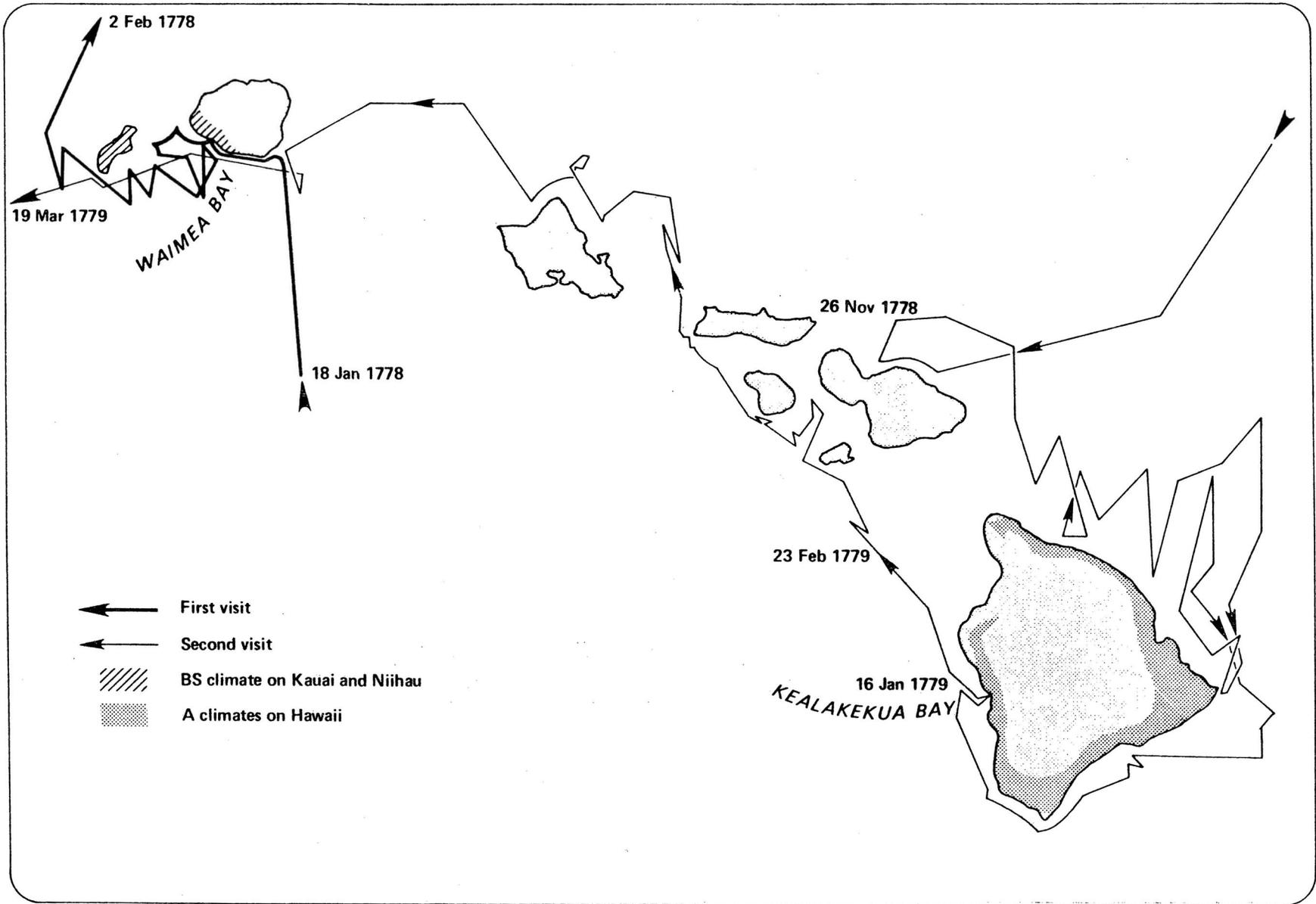


Figure 2 Cook's Third Voyage in Hawaiian Waters

environment for yaws; as could be expected, none was observed. Presumably, the local population was open to infection from venereal syphilis.

Although certainly ignorant of these environmental complications, Cook was sensitive to the need to prevent the members of his crew who were infected with venereal disease from passing their complaint on to the Hawaiian population. The controversy over the introduction of venereal diseases in Tahiti, by Wallis or by Bougainville, and his previous experiences on the First and Second Voyages had alerted him to the awful possibilities. In his journal, he makes the following entry on the second day in Hawaiian waters:

"As there were some venereal complaints on board both the ships in order to prevent its being communicated to the people, I gave orders that no women on any account whatever were to be admitted on board the ships, I also forbid all manner of connection with them, and ordered that none who had the venereal upon them should go out of the ships. But whether these regulations had the desired effect or no time can only discover. It is no more than what I did when I first visited the Friendly Islands yet I afterwards found it did not succeed...³
(Beaglehole, 1967, I, pp. 265-6).

In spite of Cook's precautions however, it is certain that venereal disease was passed on to the Hawaiian population during this visit. Because of high surf, a party of 20 men and an officer had to be left on Niihau for two days.

"thus the very thing happened that I had above all others wished to prevent" (January 30, 1778).
(Beaglehole, 1967, I, p. 276).

³Cook's regret over the introduction of "the venereal" to Tonga may also be misplaced as the same problems of confusion with yaws occurred there.

King wrote

"the captain was very uneasy at their staying on shore, being apprehensive, that his endeavours in hiding any connections with the women would now be frustrated..." (Beaglehole, 1967, I, p. 276).

Samwell a ship's surgeon observed after this incident

"whether they were free of [venereal disease] on our coming among them is more than we know, certain it is that we saw no signs of it, nor did any of the people of either ship contact it here, tho it was known that some of those who were on shore had intercourse with the women." (Beaglehole, 1967, II, p. 1083).

On February 2nd, 1779, after 15 days in the waters around Kauai and Niihau, Cook's expedition sailed away.

After nearly 10 months in the far North Pacific, Cook returned to Hawaii, after a 25-day run from Unalaska Island where, incidentally, some of his crew had acquired a fresh dose of "clap".

"As some few of our People had got the clap by their Commerce with the women [of Unalaska] the Captain had the ship's Company examined by the Surgeon. In order to prevent it's fatal [sic] influence at Sandwich Isles." (Gilbert, 1776-9).

On November 26th 1778, Cook sighted Maui. He promptly reissued the orders forbidding women to come aboard but observed

"the evil I meant to prevent by this I found had already got amongst them. They were of the same Nation as those of the leeward islands, and if did not mistake them they knew of our being there [at Kauai]. Indeed it appeared rather too evident as these people had got amongst [them] the venereal distemper, and I as yet knew of no other way they could come by it." (Beaglehole, 1967, I, p. 473).

To be so evident however, (Cook did not land, but traded with Hawaiians in canoes) the disease can scarcely have been gonorrhoea, but would have to be syphilis at least at the secondary stage or, much more likely, given the windward location, yaws.

There is very strong evidence that gonorrhoea was also present in the Maui population by this time as King records three Hawaiians as being in

"great distress: they had a clap, their Penis was much swell'd, and inflamed. The manner in which these innocent people complained to us seem'd to me to show that they considered us as the original authors." (Beaglehole, 1967, I, p. 498).

This clinical description is undoubtedly of gonorrhoea observed two days after arrival, and must be admitted as strong evidence of the rapid transmission of gonorrhoea from Kauai to Maui.

Cook records women visiting his ship just past South Point

"It was not possible to keep [the women] out of the ship and no women I ever met with were more ready to bestow their favours, indeed it appeared to me that they came with no other view." (Beaglehole, 1967, I, p. 486).

On January 17th 1779, Cook finally came to anchor at Kealahou where he decided to stay some time to rest the crew and refit his ships. While one might now have expected Cook to give up his fight to stop his men from venereally infecting the Hawaiians, on the theory that the damage had already been done, there is some evidence that he persisted; a William Bradley is recorded as receiving two dozen lashes for "disobeying orders and having connections with women knowing himself to have the Venereal Disorder on him." (Beaglehole, 1967, I, p. 511). This note is the earliest specific account of a venereally infected crew member having intercourse with

Hawaiians. The difficulties Cook faced at Kauai and Niihau, must have been overwhelming in Kealakekua and there can be little doubt that many of the crew enjoyed the sexual favours of their hosts.

Since the Kona district has a high-rainfall tropical-forest type climate, there must be real doubt that Cook's crews could have infected the locally-born Hawaiians there with venereal syphilis. Samwell, a surgeon with the expedition, makes the point:

"During our stay in Keragegooah [Kealakekua] Bay, where we had constant opportunities of directing our enquiries to the most intelligent of the natives, I met with none who could give me any information on the subject, [of venereal syphilis] nor could I learn that they had the least idea of our having left it at Atowai [Kauai], or that it is a new thing amongst them."

and,

"it is hardly possible, that the disease should have spread so far, and so universally, as we found it at Ouwhyee [Hawaii] in the short space of time which intervened between our first and second visit to the Sandwich Islands... The priests ... seemed to have an established mode of treatment, which by no means implied, that it was a recent complaint among them, much less that it was introduced only a few months before." (Samwell, 1786, pp. 38-40).

After the loss of Cook at Kealakekua, the expedition moved west through the archipelago back to Waimea, Kauai, where the following observation was made by Captain Clerke.

"Here are many of these good Folks, both Men and Women about the ship miserably afflicted with the Venereal disease, which they accuse us of introducing among them during our last visit, they say it does not go away, that they have no antidote for it, but that they grow worse and worse, explaining the different symptoms in the progress of the disorder till it totally destroys them. Captain Cook did take such preventative methods

as I'd hope'd and flattered myself would prove effective, but our Seamen are in these matters so infernal and dissolute a crew that for the gratification of the present passion that affects them they would entail universal destruction upon the whole of the Human Species." (Beaglehole, 1967, I, p. 576).

This is scarcely gonorrhoea but would seem to be a description of rather violent cases of venereal syphilis, which, because of its applying to a population living along the arid southwest coast of Kauai, implies that the disease was recently introduced to a previously yaws-free and therefore non-immune population.

To conclude, can we make some sense out of these superficially conflicting accounts? Cook's crews may have introduced venereal syphilis to Kauai and Niihau; Clerke's account suggests they did. But it is not likely to have been possible at their other points of contact, particularly at Kealahou. It is possible that the syphilis introduced at Kauai could have been disseminated to the Kona Coast within the year between Cook's two visits, but the relative slowness of syphilis as a contagious disease, certainly compared with gonorrhoea, which apparently was not yet common in either Maui or Kona, as well as the alarming nature of the observed symptoms, make it much more probable that it was yaws that the Cook expedition observed so frequently. Their guilt at having caused the introduction of venereal syphilis at Kauai was therefore probably misplaced as far as Kealahou was concerned. Samwell's doubts about Cook being responsible for the state of health of the stricken Hawaiians there were probably justified. But not for long.

Although endemic in some parts of the archipelago, yaws must have existed under some stress. The adoption of cotton clothing and the addition of soap (an effective germicide as far as the yaws treponeme is concerned)

to the Hawaiian practice of frequent washing, gradually reduced the incidence of childhood yaws, and the contraction of venereal syphilis became more likely at later age. Along with New Zealand, the Societies and the Marquesas, Hawaii became by the late 19th Century included among the few places in the Pacific Islands where venereal syphilis was a hazard to visiting seamen, not to mention the local population. References which could apply to yaws pass out of the literature.

With gonorrhoea, however, the situation must have been different. Cook's crews could have introduced it to Hawaii from both the Society Islands and from the Aleutians, and, from the description of the cases observed off Maui, probably did. Nothing except continence could have prevented its spread to the Hawaiians; from several accounts one is forced to conclude that, Captain Cook himself excepted, there just was not much continence around, on either side. The consequence was that widespread infertility among Hawaiian women became a matter of intense concern by the 1840s and 50s. (Schmitt, 1968, pp. 32-38).

Can we continue to blame Captain Cook for these introductions or should we perhaps recognize that, as the most humane of the Pacific explorers, and by the lights of his times, he was exceptionally energetic and concerned in preventing the transmission of venereal diseases? He failed, but at least he tried. Perhaps if he and his fellow chroniclers had not written so voluminously about their efforts, and their concern that they seemed to have failed, little now would be known or told about it. After all, the man who introduced tuberculosis, also terribly damaging to the Hawaiians, seems to have escaped the literature, his good name intact.