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A 'Supply-Side' Aspect of the African Slave Trade:

*The Cowrie Production and Exports of the Maldives**

Jan S. Hogendorn**

The little white shell called the money cowrie was considerably the most important money import to West Africa over a period of several centuries, and was the major imported exchange medium during the era of the slave trade.

Eventually the cowrie was imported in tens of thousands of tons by Europeans from the Maldivian Islands in the Indian Ocean. They first found use along the middle Niger, having made the desert crossing, then spreading westward to Mauritania before 1400 and also southeast and southwest along the Niger River long before the Atlantic slave trade began.¹

Very large increases in the volume of cowrie imports came during the growth of slave exports in the eighteenth century. From their area of original use, they spread East to Hausa territory in that century's early years, just after moving South from their original Niger River homeland area to the forests between the Ivory Coast and the Niger Delta, 'where they merged with cowries imported by European traders by sea from the sixteenth century onward.'²

In the eighteenth century, imports of the cowrie were far greater in both volume and value than that of any other currency. Among many other contemporaneous accounts, William Bosman spoke of the inability to carry

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on trade for slaves if cowries were not part of the exchange;³ O. Dapper reported the need to make cowries a third of the value of any slave exchange;⁴ while the Royal African Company called them 'almost a *sine qua non*' for trade.⁵

In Africa cowries also spread North from the coast in the eighteenth century, the movement documented especially well for the Central Savanna where Paul Lovejoy has investigated their large-scale introduction into Hausaland and Nupe.⁶ A significant proportion travelled via Oyo, whose authorities managed a North-South exchange, cowries moving North in trade for slaves and other Savanna products coming South.⁷ Cowrie traffic on the Niger River was similar, with the Igbo middlemen sending slaves South and cowries North.⁸ Muslim merchants facilitated a contemporaneous East-West trade, and cowries eventually reached the Volta markets, further enlarging their area of circulation.⁹

The abolition of the slave trade in the nineteenth century's first decade virtually halted cowrie imports, but imports fully recovered when the palm oil trade opened.¹⁰ The trade from the Maldives was eventually ruined by the 'great cowrie substitution' of *Cypraea Annulus*, the larger East African cowrie that was much cheaper both for the European importers and West African buyers. Led initially by German firms, Hertz first, then O'Swald (both based in Hamburg), and followed by the French firm of Victor Régis, the West African market was flooded with *Annulus*, a great inflation ensued, and shortly thereafter their import was prohibited by the colonial authorities around the turn of the century.¹¹

Cowries: The Supply Side

These lineaments of cowrie imports to West Africa especially by Portuguese, French, Dutch and British merchants, their crucial role in the slave trade, and their long hegemony as the major imported money supply of the western part of the continent, have long been known.

Interestingly, the 'supply side' has been thoroughly neglected. No modern economic historian has previously studied their source of supply in the Maldivian Islands, nor their shipment to Europe, whence they were re-exported to West Africa.¹² This paper is the first in what is intended to be a series that surveys cowrie production and export from the Maldives, their shipment and distribution in their two major markets, Amsterdam and London, and data on the volume exported to West Africa.

As the first of the series, this paper examines the initial notices of a cowrie trade in the Maldives, explores their conditions of production in those islands, examines whether sales were competitive or royal monopoly, discusses Dutch efforts to obtain a buying monopsony during the slave trade's era of greatest exports, and concludes with a discussion of their shipment to

Europe.¹³ This 'supply-side' discussion will, it is hoped, illumine a previously obscure portion of what is acknowledged to be a critical component of the African slave trade.

The Cowrie

Cypraea Moneta, the money cowrie, is a seashell with a porcelain-like finish, small, and admirably suited for use as a money. Its lustrous white color makes its appearance attractive, and helps to explain its use in decoration, ornamentation, and religious ritual.¹⁴ It is comparable in durability to metallic coins, not easily broken though it can be crushed with a footfall. It is impossible to counterfeit, except by the related *Cypraea Annulus* of the East African coast, which is ordinarily larger than *moneta* but can sometimes pass for it. Unlike many commodity monies (cloth strips, metallic currencies) there was little 'leakage' into commodity use. Most importantly, however, it could be supplied in very large quantities at very low cost. An individual shell would thus represent extraordinarily low value by comparison with metallic coins, rendering it appropriate for monetary use when incomes and prices were very low. It thus was eminently successful in the role of 'small change' over wide areas of its use.¹⁵

The little gastropod is a carnivore that feeds on polyps, some corals, and animal detritus such as half-consumed fish or excrement. Its tremendous abundance in the Maldives may be due to a plentiful supply of foods, a relative absence of predators, or especially favorable reproductive conditions, the latter perhaps influenced by ocean currents.¹⁶

Though the reasons for its abundance in the Maldives are not conclusive, the abundance itself is established fact. There is general, long-standing agreement that the world's greatest available supply of *Cypraea Moneta* is from the central atolls of those coral islands, especially Haddummahti, Huvadu, and Ari atolls.¹⁷ There are other major concentrations of the money cowrie, especially Sulu in the Philippines, coastal Borneo, and the Ryukyu Islands, but they never approached the importance of Maldivian production for the Indian Ocean and African trade.¹⁸ In many areas they are found in quantity, but mixed with other varieties to such an extent that collecting them becomes a time-consuming hunt, with large-scale production accordingly impractical.¹⁹ The money cowrie is, of course, *not* native to West Africa, an area of very large use.

The cowrie trade from the Maldives was an ancient one. The first mention of the shell in connection with the Maldives was made by the Persian traveller Sulayman al Tajir in the ninth century, and the Arab Al Mas'udi in c. 943 [Mas'udi had visited Ceylon in 916 but apparently follows Sulayman's account].²⁰ Alberuni (c. 1020) notes that the islands off India's west coast can be distinguished by their chief products, the Dīva Kūdha, islands of cowries, and the Dīva Kanbar, islands of coir, thus distinguishing

between the Maldives and Laccadives.²¹ Ibn Beithar, who died in 1248, also notes that the Maldives were the islands where the cowries originated;²² and in the same decade Tabakat-t-Nasiri (c. 1240) observes that they were being used for money in Bengal.²³

The adventurous Ibn Battuta, who had personally seen Maldivian cowries being used in West Africa, made the first extensive comments on the Maldivian export trade after his visit of 1343 which lasted 18 months. He states that they were exchanged by barter for Bengali rice, and sold also to Yemeni traders who put them into ballast instead of sand for the voyage west.²⁴ The general lineaments of the trade are thus discernible 200 years before the Europeans began to compete as buyers during the sixteenth century. The Maldives were the major source of *moneta*. The shells were shipped largely to Bengal,²⁵ with some finding their way via the Red Sea and across the Sahara to West Africa's savanna region.²⁶ They were used as money at home in the Maldives themselves – many visitors commented on the fact.²⁷ They were not, however, exported to the nearest and most likely markets, the Malabar Coast and Ceylon, because they were not monetized in these areas.²⁸ At all time periods cowrie exports were an essential element in the purchase of Bengali rice, for the islands were incapable of producing sufficient starchy staples for subsistence, while Bengal commonly produced a substantial surplus for export.²⁹

'Manufacture' of the Shells

It might be assumed that the shells were simply plucked off the beaches and loaded into ships for export. Such a view would be wrong on two counts. First, if the little inhabitant of the shell was already dead and the cowrie had been rolled up and down a beach by the waves, its lustre was diminished and it was often rejected by buyers. If, however, the little animal was still alive on first gathering, it would not long remain so, and an overpowering stench was soon the result.

These considerations led to methods for the collection of the shells with live inhabitants, and for processing to rot out the animal matter. There are three traditions for collection; only one for processing.

Collection methods included wood floats, wading, and hooks, employed as already noted chiefly on the atolls of Haddummahti, Huvadu, and Ari. The early travellers are unanimous in their description of coconut branches placed in the shallows, then hauled ashore a few months later after cowries had attached themselves to the wood and palm leaves.³⁰ This method of collection seems to have become obsolete, to be succeeded by the 'wading' method. 'Twice a month, when the tides suit,' wrote H. C. P. Bell in 1883, 'men and women wade into the sea waist deep and detach them from the stones under which they cling. One man will sometimes gather as many as 12,000 in a day.'³¹ The wading method was apparently first observed by

Pyrard, who noted how they were 'fished twice a month, three days before and three days after the new moon, as well as at the full, and none would be got at any other season.' [Field work in the Maldives will be directed at why this was the case. Presently the reason is unknown. Presumably tides?] 'The women gather them on the sands and in the shallows of the sea, standing in the water up to their waists.'³² Note the indication that female labor was the rule in the seventeenth century, with the sexes mingling by the nineteenth.

The third collection method, by 'bait and line,' is far less frequently mentioned and in fact engenders skepticism. Captain W. F. W. Owen wrote in 1832 that coconut branches and leaves 'are laid together and lashed up into bundles about the size of a wheat-sheaf, two of which constitute what is called a *balsa*. ... On these *balsas* they then take a number of trot lines, baited as we bob for eels, viz. with short threads attached to them at every five or six inches distance, and each with a bit of offal meat for bait, tied by a knot to prevent its slipping off. The shell-fish swallows this, knot and all, and is hauled up with the trot line.'³³ Skepticism arises because, by comparison to the other two methods, the costs in time would be exceptionally large. The evidence given earlier is that no bait and no lines were needed for collection. Field work in the Maldives will, I hope, settle the question.

Processing the shells after collection was also a part of 'production,' and here the tradition is clearer. Mas'udi in the tenth century says they were sun dried on beaches, during which time the bodies rotted, leaving behind the empty shells.³⁴ After that, however, the sources refer to the burial method. Ibn Battuta says the cowries were placed in pits dug in the sand of the beach, where they were allowed to rot.³⁵ De Barros says 'buried in the earth;' John Marshall in 1677 says 'buried until all their fish is gon out of them;' Captain Hamilton states (1727) that pits are dug in the sand, where they are placed, covered, and left, 'two or three Years in the Pit, that the Fish may putrify, and then they take them out of the Pit, and barter them for Rice, Butter and Cloth ...'³⁶ Burial was the method of processing in modern times as well. H. C. P. Bell reported in 1883 that the shells were kept below ground 'until all traces of putrefaction have disappeared.'³⁷

The conclusion is that collection and processing was a labor-intensive, time-consuming task lasting for some months at a minimum, possibly even as long as two or three years. There was thus always a capital aspect to the production of the shells, and an accompanying need for work long before reward. With such a delay in adjusting to changes in market conditions, the short run elasticity of supply must necessarily have been quite low. This aspect of cowrie production has heretofore been little noticed.

Shipment to Male

Male, capital of the Maldives and the 'King's Island,' is located on the south side of Male atoll. It is to the north of the main cowrie-producing islands,

and was the first destination of the processed shells. They were probably washed after being dug out of their burial pits – Captain Owen mentions this explicitly.³⁸ Then they were shipped in November and December to Male and put into storage, some in warehouses, some underground as a cheaper and more convenient means of storage.³⁹

Before export the cowries were packaged. The usual practice was to put them in three-cornered bundles of material woven from coconut leaf called *kottas*, weighing about 25 pounds each and containing 12,000 shells. The packages were stitched tight at their base or mouth with coir. They might alternately be thrown loose into the hold of a ship, but this seems to have been less frequent.⁴⁰

The shells were then loaded aboard ship, frequently a Maldiv merchant vessel bound for Bengal or (in the eighteenth century) Ceylon; sometimes on a vessel owned in Bengal or elsewhere in India; and infrequently on a European ship. Maldiv shipping was made of coconut wood, with rigging and sails of coconut fibre. Said Hamilton in 1727, 'their Hulls, Masts, Sails, Rigging, Anchors, Cables, Provisions, and Firing are all from this useful tree.'⁴¹ Hamilton thought the average Maldiv vessel was of 20 to 30 tons, but Bell reported in the nineteenth century that 100 to 200 tons was common for ships in the Bengal trade, with 50 to 60 tonners used for the voyage to Ceylon.⁴² Reginald Heber, he of 'Greenland's Icy Mountains,' described the Maldiv ships at Calcutta in the 1820s: 'one mast, a very large square mainsail, and one top sail, the more solid parts of coco-wood, the lighter of bamboo, [able to] sail very fast and near the wind; each carries from 30 to 50 men, who are all sharers in the vessel and her cargo. . . . Their size appeared to me from 150 to near 200 tons, raised to an immense height above the water by upper works of split bamboo, with very lofty heads and sterns, immense sails, and crowded with a wild and energetic race of mariners, who . . . were really bold and expert fellows, and the vessels better sea-boats than their clumsy forms would lead one to anticipate.'⁴³

Typically the Maldiv ships would sail with favorable monsoon winds; departures for Bengal taking place 'late in August or early in September, annually, having the South-West monsoon in their favour, and return in December and January with the North-East monsoon.'⁴⁴ Port dues and charges at Male were collected by royal officials, payable in rice in the seventeenth century, in cowries in the nineteenth.⁴⁵

Was the Cowrie Trade a Royal Monopoly?

The cowrie commerce appears to have been a royal monopoly for a thousand years from the earliest mention of the trade in the ninth century. 'Their money consists of cowries. The queen stores these cowries in her treasuries,' wrote Sulayman. Mas'udi gave a similar description, and Idrisi stated that

'their king preserves these shells in his treasury, and he possesses the greater portion of them.'⁴⁶

When the Portuguese attempted to enter the Maldivé trade in the sixteenth century, they found that the island-king had entered into an agreement with a Cannanore merchant, Muhammad Ali, to whom the trade-monopoly in cowries (and some other exports including coir) was farmed out. The heyday and eventual suppression of Muhammad Ali were surveyed in detail unusual for Maldivé economic history by M. A. H. Fitzler in the 1930s, quoting numerous Portuguese sources.⁴⁷ Years of attempts by the Portuguese to gain control of the monopoly for themselves (discussed in a later section) eventually failed, and in the 1670s, Dutch observers considered cowrie exporting again a royal monopoly, clear from the instructions given to early Dutch trading and exploratory expeditions to the islands.⁴⁸ Shortly thereafter, in 1683 the Captain of the *Britannia* referred to the complete royal control of the trade.⁴⁹ In 1685, William Hedges spoke of the shells 'taken for ye King,' and noted one atoll (not named) as the source 'whence the King gets all (or greatest part) of his Cowrees.'⁵⁰

A passenger on the *Boscawen* in 1749 wrote that cowries are 'the King's sole property,'⁵¹ while the Abbé Prévôt's compilation, published 1780, also explicitly mentions royal and noble control of the trade.⁵² Many years thereafter, in 1844, when the Hamburg firm of Hertz sent the first European ship to trade in the Maldives for many years, the report was that the export of cowries was carried on only from the King's Island, in exchange for rice and salt.⁵³ Rosset in the 1880s concludes our case covering a thousand years: 'No other part of the group is allowed to traffic with foreigners, all the produce having to be brought to Málé.' The inhabitants of the other atolls would send their goods to the capital 'where they are purchased by the Sultan, who gives rice, cloth, etc., in exchange.'⁵⁴

All during the long history of royal monopoly, enforcement seems to have been in the hands of noble 'fief-holders,' recipients of tribute and taxes from their assigned atolls, and responsible for administering the trade laws.⁵⁵

Shipment to Bengal

We have already noted that from the earliest period the cowries were shipped largely to Bengal, and this continued to be true well into the eighteenth century. When Portuguese observers first described the trade, in the sixteenth century, they uniformly judged Bengal as the focus for exports. A smaller quantity was shipped to other destinations however. Duarte Barbosa, c. 1517, mentioned a traffic to the Gulf of Cambay as well as the main importing area, Bengal, while de Barros about the same time noted shipments to Siam in addition to the exports to Bengal.⁵⁶ But Bengal was by far the largest market; there is mention of no others by numerous

observers, for example Gaspar Correa in 1561: 'whole vessels are laden with them, and which make a great trade in Bengala.'⁵⁷

Pyrard was explicit: 'in one year thirty or forty whole ships loaded with them without other cargo. All go to Bengal, for there only is there a demand for a large quantity at high prices.'⁵⁸

The accounts that discuss the nationality of the shipper reflect the long-standing participation of two sorts of merchants, islanders and foreigners, both of course subject to the royal cowrie monopoly. Pyrard saw ships from Bengal, from Cochin (one Portuguese-owned, with a mestiço captain and a crew of Christian Indians), and from Gujarat;⁵⁹ in Bengal, 1683, William Hedges saw Surat ships just arrived from the Maldives with cowries; and Bengali vessels were still engaged in the trade in the 1880s when H. C. P. Bell discussed the islands' exports.⁶⁰

For at least 100 years, and probably more than 200, the chief destination of the cowrie exports was Balasore, the cowrie port, some 60 miles from the mouth of the Hooghly River on the northwest side of the Bay of Bengal. Before Hooghly navigation was improved, Balasore was the only reasonable seaport on the shores of the bay, and for this reason it had early been selected as a site for European factories.⁶¹ A British establishment was founded there in January, 1651, though it had been occupied from time to time since 1642;⁶² there were also Dutch and French posts at the town, and earlier a Portuguese establishment.⁶³ 'One continued sandy bay,' said Hamilton, 'an admirable roads protected by a cape from southerly winds; ships would lie in these roads some distance from shore.'⁶⁴

There are numerous references to the importance of Balasore as an entrepôt for Maldivian cowrie exports. At the Maldives, wrote Hamilton, cowries are traded for the rice, cloth, etc., 'which shipping bring from Ballasore in Orixia.' 'The town of Ballasore drives a pretty good trade to the Islands of Maldiva. Those Islands . . . have no rice or other Grain of their own Product, so that Ballasore supplies them with what Necessaries they want, and, in Return brings Cowries and Cayar for the Service of Shipping.'⁶⁵ Several passages in S. Bhattacharya's work on Bengal's economic history also refer to Balasore as the port where the cowries were purchased.⁶⁶

Bowrey, writing in the 1670s, stated that 'The Nabob and Some Merchants' in the area of Balasore had six or seven vessels regularly employed in bringing cowries and coir from the Maldives.⁶⁷ Om Prakash has most valuably published records kept by Dutch factors on ship movements in the Bay of Bengal. Among these are departures from Balasore 1680-1681 to 1706-1707, and arrivals at that place, 1670-1671 to 1704-1705. His tables show that by the end of the seventeenth century, the Maldivian trade was much more important than any other for Balasore; that Hughli traded far less with the Maldives than did its sister port; and that the available data show the trade largely 'on the account of Bengal merchants.'⁶⁸

Several observers noted the price fluctuations caused by the arrival of the cowrie ships at Balasore and the price differential between that port and points where the cowrie ships did not call. John Marshall wrote in 1677 that at Hughli the cowrie is 5, 6, 7, and sometimes 10% dearer than at Balasore.⁶⁹ Said Bowrey, cowries 'Seldome rise or fall more than 2 Pone in one Rupee, and that onely in Ballasore at the arrivall of the Ships from Insulae Maldivae.'⁷⁰ With development of Hooghly River piloting and navigation, Balasore's commercial importance declined early in the eighteenth century. But it remained the cowrie port, with notices of the Ostend Company's competition raising the price of shell (1726), with the statement 'Balasore, where cowries were purchased' (1738), and with French competition said to be raising cowrie prices there in 1739.⁷¹

Om Prakash discusses a number of commercial developments at Balasore round about the year 1700. These include lesser degrees of participation in trade by noble families (due perhaps to their impoverishment following the break-up of the Mughal Empire, he suggests), and the concentration of Bengal merchants on the Maldivian trade as their opportunities diminished elsewhere because of the East India Company pass systems.⁷² Prakash also notes that some 40 years earlier, the Sultan of the Maldives had fruitlessly sent an emissary to the *faujdaar* of Balasore, asking him to seek the aid of Emperor Aurangzeb in prohibiting British and Dutch ships from visiting the islands.⁷³ This will serve as our cue to examine the rapidly developing European role in the trade.

The Portuguese and Cowries

From their first (1503) unfortunate contacts with Maldivian shipping (unfortunate for the Maldivians at any rate) the Portuguese were aware of the cowrie trade. Gaspar Correa gave a vivid account of how Vincent Sodre, Chief Captain of the Fleet after Vasco da Gama's departure for home in 1502, captured four Maldivian ships off Calicut, cowries part of their cargo. A hundred of their sailors were brutally burned to death by the Portuguese for violating the new Portuguese pass system.⁷⁴

In the early decades of Portuguese contact, the Europeans worked to suppress the farmed monopoly of Maldivian trade referred to above.⁷⁵ Their purchase of cowries for export to West Africa had begun at the latest by 1515, in which year there is a record of a ship arrival at Benin, and when the Portuguese king licensed a merchant to bring 500 quintals of cowries [1 quintal = 4½ kottas = originally 108, and later 112.5 pounds] from India annually as ballast and at no charge. These shells were eventually destined for São Tomé.⁷⁶ The data on Portuguese exports are not nearly so complete as those available for the Dutch and British trade. The 54,000 pounds of the license is as much as was shipped to Africa in some years of the eighteenth century, but far below that century's peak. João de Barros, however,

writing in 1563 noted very much larger quantities shipped by the Portuguese: 'in some years as much as two or three thousand quintals are brought [to Portugal] by way of ballast; they are then exported to Guinea, and the kingdoms of Benin and Congo, where also they are used for money.'⁷⁷ The present author suspects these figures are on the high side, as West Africa's export trade was in its infancy during this period. (Payment for the shells had to be made of course via exports.) The weight equivalent is 216,000 to 324,000 pounds, implausibly matching the preliminary figures for British and Dutch totals for numerous years of the eighteenth century that are expected to be published by Marion Johnson and the author in 1982. Work in the Portuguese archives will be undertaken to check de Barros' figures.⁷⁸

Unlike the later Dutch and British trade, a goodly share of Portuguese purchases were made at the Maldives themselves;⁷⁹ and their archives reveal plans for establishing a trade monopoly with the islands.⁸⁰ To this end they twice occupied Male and operated through a puppet Sultan whose descendants lived in Goa and claimed the throne until the line died out in c. 1671.⁸¹ It was doubtless due to these experiences that the merchants of other European countries often found it so difficult to trade at the islands during the subsequent period of the commerce.

Via their system of sea-passes, the Portuguese attempted to restrict trade to Portuguese India and states under Portuguese influence; and they also awarded a monopoly of the Indian cowrie trade from time to time, as to Don Philip in 1626 and to the Duke of Medina a short while thereafter, all with questionable long-term effect.⁸² For a period in the early sixteenth century the Portuguese brought the shells in ballast to Goa and Cochin, whence they were shipped to Europe by the Dutch.⁸³

Portuguese power in the Indian Ocean was on the wane after the loss of Hormuz in 1622. Nonetheless, as late as 1645-1646 a Portuguese-appointed king had rights to purchase 500 quintals (= 54,000 pounds) of cowries for sale in Portugal.⁸⁴ Even when their participation in cowrie-buying had long ended, some influence still persisted, however. Portuguese remained the main European language used by Maldivian traders for many decades.⁸⁵

The British and Cowries

With the Dutch, the British were the largest inter-oceanic shippers of cowrie shells. These shells were imported to England by the East India Company, were sold regularly at the Company's auction sales for the African trade, and (with shells brought to Britain by interlopers) entered the customs record on their reexport.

The British seem usually to have purchased their shells in Bengal, especially Balasore, and far less frequently at the Maldives. They were subject to constant frustrations in trading direct with the islands – and even as late as

the 1780s, their knowledge of Maldivian waters was very limited.⁸⁶ The Dutch established direct connections in the middle of the seventeenth century, and when the British tried to do the same, they found they had been forestalled. They even resorted to purchase by force; William Hedges tells the story of an East India Company ship, the *Charles*, attempting to buy cowries in 1683. Her men pelted with stones and showered with arrows, six of them wounded, she opened fire and 'by ye Mouths of [ye] Guns forced them to a compliance and permission to load what cowries they would at Markett Price.'⁸⁷ Two years later, Hedges' ships at the Maldives flew an all-red flag (a piece of a British red ensign) 'to appear like a Moor's Vessel, not judging it safe to be known to be English, our Nation having lately gott an ill name by abusing ye Inhabitants of these Islands ...'⁸⁸

In 1700 the British were lobbying with the Bengal merchants to increase their shipping to the Maldives so more cowries could be acquired.⁸⁹ The attempt was made from time to time to call at the Maldives for cargo, as in 1705, when the *Mary Galley* belonging largely to Thomas Bowrey was ordered to load 'as deep as she will swim with Rice, etc., for Maldiva,' where she was to trade for cowries. But the papers leading up to these orders make it clear that the British at this time had little knowledge of navigation in those waters, the method of trade normally employed there, and what sort of imported goods were in demand.⁹⁰

Later in the eighteenth century, the Dutch had some success in diverting large quantities of shell away from Bengal to Dutch Ceylon. That meant that Britain, still dependent on purchases in Bengal, had to deal in a market where the supplies were sinking relatively, perhaps absolutely. The British return fleets kept the quantities brought to Britain high through most of the period, however, as subsequent data to be published by Johnson and Hogendorn will show. A ship detailed to carry cowries from Bengal to London would carry as much as ten tons, as in the 1753 orders.⁹¹ As the Dutch position in the market deteriorated, the British did manage to secure a contract with the Maldives to export 2,000 kottas (= 50,000 pounds) annually, over and above what they were able to purchase in Bengal.⁹² Whether this contract, of 1772, was long-lasting and involved many visits by British ships to the Maldives, is not yet known to the author.⁹³

Although the British took Ceylon from the Dutch in 1796, they did not attempt to get cowries direct from the Maldives. The trade became once again a Bengal-Maldivian exchange of rice for cowries; no British ship is said to have called at the islands after that date until the surveying expeditions of the 1830s.⁹⁴ British interest in cowries had in any case died away with the abolition of the African slave trade; when Britain resumed large-scale cowrie exports to Africa in the era of 'legitimate commerce,' the shells were purchased in Bengal.⁹⁵

The Dutch and Cowries

Some 40 years after the chartering of the Dutch East India Company, the VOC, in 1602, the Netherlands began to show an interest in cowries. Acquainted with the commerce from their Bengal trade, their Hughli headquarters began investigations, and their first purchases were probably made in that area.⁹⁶ The initial recorded visit by a Dutch ship to the Maldives was in 1602.⁹⁷ A vessel loaded with rice was sent from Ceylon in 1640 to study trade possibilities, and purchases of cowries began shortly thereafter.⁹⁸

Maldivian ships had traditionally called at Ceylon with cargoes of dried fish and coconuts. Cowries now came to be included.⁹⁹ Very early on, the Dutch attempted to send their own vessels to Male, but 'the Maldivians would not admit the Dutchmen into their country, obviously for fear of their political independence. So the Company thought they would be less suspicious of burghers, through whom they tried to get cauris from there, with some success.'¹⁰⁰ (The Dutch burgher community of Ceylon was largely made up of discharged soldiers, sailors, and clerks.)

As H. C. P. Bell put it, the Dutch 'were not slow to gauge the advantage of a complete control over the traffic in cowries. This monopoly they attempted, with much success, to establish throughout the latter part of the seventeenth and much of [the eighteenth] century.'¹⁰¹ The as yet preliminary data from the joint archival work of Johnson and Hogendorn appears to confirm some Dutch monopoly power attained in some portions of these centuries, but not to the extent Bell suggests. [The reader should be aware that Bell apparently had some prejudice against the Dutch, which may color his views of the monopoly's success; recall that 'monopolist' was not a compliment when he wrote in the 1880s.¹⁰²]

Most Dutch cowries came to Ceylon in Maldivian ships. On occasion, the annual shipments were inadequate and the Dutch would send a vessel 'to negotiate for larger importation.'¹⁰³ Efforts to engineer a long-term buying agreement in 1688 failed, but by 1697 there was a steady trade via Maldivian ships bringing cowries to Colombo and Galle, and carrying away areca nuts and spices.¹⁰⁴ 'Caress' the Maldivians and 'animate them more and more' to carry cowries are words used in instructions to various Dutch governors of Ceylon.¹⁰⁵ Further Dutch voyages to the Maldives for cowrie negotiations with Sultan Ibrahim were reported in the 1720s and 1730s. The years 1720-1750 were perhaps those of briskest Dutch cowrie trade, and sometimes annually cargoes of rice and spices were dispatched to the islands to firm commercial ties. These ships (two in 1723, other voyages in 1727, 1728, 1732, and 1734) were instructed to carry cowries back to Ceylon (8,000 to 10,000 kottas in the case of 1723).¹⁰⁶

These Dutch ships in the trade were not, however, examples of the

ordinary form of commerce. Maldive vessels sailing to Colombo and Galle continued to bring the greater quantities. In 1740, Governor van Imhoff wrote that 'the Maldive boats import cowries,' while a governor's letter to his successor in 1757 noted that 'the Maldivians still come quite willingly in their little boats to trade with us.' The two major complaints of the Dutch were the insufficient cowrie supply in some years, and the lateness of their arrival (they had to come in October and November to Ceylon if they were to be loaded on the return ships to the Netherlands).¹⁰⁷ Insufficient supply seems a legitimate complaint. Dutch demand, as expressed by their buying targets, was usually higher than the quantity actually obtained. The buying target had been 500,000 pounds in the 1720s; 400,000 pounds as quoted in a 1740 memoir for Governor Bruininck; dropping to 150,000 to 300,000 pounds in 1764-1766.¹⁰⁸ Sales at the VOC Kamers in the Netherlands were, however, almost always below these figures, according to the preliminary Johnson-Hogendorn archival data.

Bell is the main authority who speaks of a Dutch cowrie monopoly during much of the eighteenth century.¹⁰⁹ This is no doubt correct for the Ceylon trade, but the preliminary data referred to above show monopoly power only sporadically. Quantities shipped to Britain during the period of monopoly sometimes surpassed the Dutch trade. A letter from the Sultan to Ceylon (9 May, 1734) explained that Dutch commercial terms are not a match for the merchants in the ships from Balasore and Bengal, who gave credit advances on imports where the Dutch required cash.¹¹⁰ There is therefore the likelihood that Dutch monopoly power in the trade is somewhat exaggerated.

For over a century the Dutch return ships sailed to the Netherlands with their cargoes of cowries, stored after arrival in the large cowrie warehouses at Amsterdam, cleaned, sorted, and sold into the African trade at the Kamer auctions. Buyers from Britain and France predominated at those auctions, because the Dutch trade with Africa was relatively small.¹¹¹ With the fall of Ceylon in 1796, Dutch participation in the trade ended, and even in 1795 when the last recorded Maldive cowrie-boat called there, sales in the Dutch Kamers had already stopped.¹¹²

Miscellaneous Shippers

Aside from the British (EIC) and Dutch (VOC) cowrie trade, there were also interlopers, the French, the Ostend Company, the Danes, still an occasional Portuguese shipment, and no doubt other members of the miscellany as well. William Hedges wrote in 1683 that the Maldives had 'much countenanced interlopers,' and the *Mary Galley* whose voyage we have discussed above was not a Company ship.¹¹³ British interlopers would presumably sell in their home country, however. There were far fewer Dutch interlopers.

The author has not studied in detail the French trade, and no quantity

figures are presently available. The Dutch governor Rumpf reprimanded the Sultan in 1721 for allowing the French to bring away large quantities, and French ships were reported purchasing at the Maldives in 1777 after their contract of 1770 for 50,000 pounds annually.¹¹⁴ A Dutch letter of the 1720s complained that some Maldivian ship captains were selling off cowrie cargoes intended for Dutch Ceylon to French shipping, raising the interesting question of whether these captains were operating with the Sultan's permission or were operating illegally on their own account.¹¹⁵

Portuguese ships on occasion still called at the Maldives for cowries, as in the 1720s, and the Danes obtained some shell, nearly 25,000 pounds reported in 1791. The Ostend Company's buying at Balasore has already been mentioned. The total quantities involved are unknown.¹¹⁶

Shipment to Europe

When in November or December the European ships sailed for home,¹¹⁷ certain distinct principles of long-distance ocean transport governed their lading. There had to be a ballast for stability. Any heavy material such as stones, sand or old anchors would serve. But, from a commercial point of view a ballast that was also a commodity that could generate sales revenue was immensely superior to a wasted item. The VOC considered saltpetre the best ballast commodity; for the Ceylon ships cowries were also included.¹¹⁸ Sometimes it is said that items shipped in ballast carry no transport cost.¹¹⁹ This is incorrect. The cost is an opportunity cost, foregone revenue from whatever other commodity that could have served as ballast. Cowries were transported free only when stones and sand were the sole alternatives. There was indeed consternation in Ceylon whenever a ship had to return with a worthless stone ballast,¹²⁰ but this does not appear to have been very common.

All during the seventeenth and eighteenth centuries, the shells appear to have been shipped to Europe in their original 'parcels of 12,000 ... little baskets of coco leaves of open work, lined inside with cloth of the same coco tree, to prevent the shells falling out.'¹²¹ These kottas with their triangular horns stored at the lowest level of the ship, continued to appear until the end of the eighteenth century.¹²²

Epilogue

The Maldivian cowrie industry is a fascinating page of economic history, furnishing as it did the major currency of West Africa and also Bengal. A royal monopoly, it faced Dutch efforts to acquire monopsony powers in the trade, but this paper suggests that the effort was somewhat less successful than has been argued by H. C. P. Bell.

With the coming of the nineteenth century, the trade slowly died. In Bengal, 'the cowrie market was in retreat. The millions of cowries slowly gave way to the millions of copper pice cut out by the machine of Messrs. Boulton and Watt.'¹²³ The market for Maldivian shells in West Africa did recover temporarily in the 1830s with the growth of the palm oil trade, imports running at some 200,000–300,000 pounds a year to the 1850s.¹²⁴ But *Cypraea Annulus* introduced to West Africa from Zanzibar by the Hamburg firm of Hertz, cut deeply into the *Moneta* market.¹²⁵ At the time the Hertz Company investigated the cowrie trade in 1844, shells were still coming from the Maldives to Ceylon and Bengal, but Chittagong and Calcutta had now replaced Balasore as the destination. The British were still buying in Bengal for the Africa trade; no European cowrie buyers had visited the Maldives 'in living memory' said Hertz, and when that firm's ship did so they had poor results – the Maldivians did not want to interrupt their rice-for-cowries trade to Bengal.¹²⁶ After that, Maldivian cowrie exports declined steadily,¹²⁷ and they had largely died out by the time of the First World War.

In the centuries of Maldivian cowrie production, was there ever over-fishing with resulting consequences on production? Johnson has suggested as much, and Heimann also.¹²⁸

There is faint evidence that this did indeed occur in the early 1720s, but that the Sultan's reaction was to limit sales as a result.

The purpose of this paper has been to discuss a 'supply-side' aspect of the African slave trade – the conditions of supply of the main money of the slave commerce, the Maldivian cowrie shell. Much remains to be learned, but the general lineaments of that trade are, it is hoped, clearer than before. Further work in European archives should eventually reveal comprehensive quantity figures of the shells arriving in West Africa. Unfortunately, very little information is available on Maldivian exports which remained in Bengal as that region's currency, so that total Maldivian production is likely to remain unknown.

NOTES

1. The major authority is Marion Johnson, 'The Cowrie Currencies of West Africa,' Part I and II, *Journal of African History*, Vol. XI, No. 1, 1970, pp. 17–49, and Vol. XI, No. 3, 1970, pp. 331–353. Other major sources are Paul E. Lovejoy, 'Interregional Monetary Flows in the Pre-colonial Trade of Nigeria,' *Journal of African History*, Vol. XV, No. 4, 1974, pp. 563–585; Philip D. Curtin, 'Africa and the Wider Monetary World, 1250–1850,' in an as yet unpublished volume edited by Maureen Mazzouai and John Richards; Chapters 2, 4, and 6 of A. G. Hopkins, *An Economic History of West Africa*, New York, 1973, and his 'The Currency Revolution in South-West Nigeria in the Late Nineteenth Century,' *Journal of the Historical Society of Nigeria*, Vol. III, No. 3, 1966, pp. 471–483; J. S. Hogendorn and H. A. Gemery, 'Abolition and Its Impact on African Monies Imported to West Africa,' in David Eltis and James Walvin, eds., *The Slave Trade and*

- Abolition*, Madison, 1981. There are two papers by Walter I. Ofonagoro covering the same topic, 'The Currency Revolution in Southern Nigeria, 1880-1948,' Occasional Paper No. 14, African Studies Center, UCLA, and 'From Traditional to British Currency in Southern Nigeria: Analysis of a Currency Revolution, 1880-1948,' *Journal of Economic History*, Vol. XXXIX, No. 3, pp. 623-654.
2. Hopkins, *Economic History*, p. 68.
 3. William Bosman, *A New and Accurate Description of the Coast of Guinea ...*, London, 1705, p. 364a. Though published in 1705, Bosman's statement refers to the period just before the turn of the century.
 4. Johnson, 'Cowrie Currency,' Part I, p. 21, and Part II, p. 348; Johnson, 'The Atlantic Slave Trade and the Economy of West Africa,' in Roger Anstey and P. E. H. Hair, eds., *Liverpool, the African Slave Trade, and Abolition*, Bristol, 1976, p. 20; and O. Dapper, *Description de l'Afrique*, Amsterdam, 1686, p. 305, a passage that first came to my attention through the work of G. I. Jones, 'Native and Trade Currencies in Southern Nigeria during the Eighteenth and Nineteenth Centuries,' *Africa*, vol. 28, 1958, p. 50.
 5. K. G. Davies, *The Royal African Company*, New York, 1970, p. 234.
 6. Lovejoy, 'Monetary Flows,' pp. 563-585.
 7. *Ibid.*, pp. 567, 569.
 8. *Ibid.*, p. 569.
 9. *Ibid.*, p. 570.
 10. Johnson, 'Cowrie Currency,' Part I, pp. 22-23.
 11. The *Annulus* invasion pioneered by Hertz and taken over by O'Swald, and the ensuing inflation are thoroughly surveyed in Johnson, Parts I and II. See also Hopkins, 'Currency Revolution,' pp. 471-483, and Curtin, 'Monetary World,' p. 18. Ofonagoro's work (see note 1) discusses the colonial prohibition of imports.
 12. A valuable (and valiant) attempt by a non-economist has very recently been made by James Heimann of Copenhagen University. See his 'Small Change and Ballast: Cowry Trade and Usage as an Example of Indian Ocean Economic History,' paper delivered at the International Conference on Indian Ocean Studies, Perth, Australia, August, 1979, and recently published under the same title in *South Asia*, vol. 111, no. 1, 1980, pp. 48-69. Though not an economist, and though interested in the Indian Ocean basin rather than the cowrie's connection with Africa and the slave trade, Heimann's work is judicious and his advice to me has been extremely helpful. His influence is gratefully acknowledged.
 13. The volume indices will be co-authored with Marion Johnson of Birmingham University, who will be responsible for the British data, and will draw heavily on the exemplary work of the author's research assistant, Floris Klinkenberg, at the Dutch Archives in The Hague.
 14. J. Wilfrid Jackson, *Shells as Evidence of the Migrations of Early Culture*, Manchester and London, 1917. The white color is from the high calcium carbonate (lime) content, up to 90% of the shell's composition and obtained from its food and water intake. See citations in note 16.
 15. See Paul Einzig, *Primitive Money*, London, 1949, for numerous mentions of its use.
 16. For details see Hyman, *The Invertebrates*, vol. 6, *Mollusca*. The author would like to thank W. F. Holstrom of the Department of Zoology of the University of Birmingham for his generous aid in explaining the habitat and living conditions of *Cypraea Moneta*.
 17. 'Found in the greatest amounts in the Maldives,' Oskar Schneider, *Muschelgeld-Studien*, Dresden, 1905, p. 102; 'common in the Indo-Pacific,' but 'abundant in the Maldives' - Mr Holmstrom of the University of Birmingham; 'c'est dans les îles Maldives qu'on pêchait le cauris en plus grande quantité,' Edouard Foa, *Le Dahomey*, Paris, 1895, p. 147; 'the major world exporter of cowries,' James Heimann, 'Small Change and Ballast: Cowry Trade and Usage as an Example of Indian Ocean Economic History,' paper delivered at the International Conference on Indian Ocean Studies, Perth, Australia, August 1979, p. 1. The three major producing atolls are identified by H. C. P. Bell, the British civil servant whose works on the Maldives published from the 1880s to the 1930s are invaluable sources. See his 'Excerpta Maldiviana: No. 4, A Description of the Maldiv Islands circa A.C. 1683,' *Journal of the R.A.S. (Ceylon)*, vol. XXX, no. 78, 1925, p. 139. Bell notes few shells are gathered in the furthest northern atoll, Thiladun-mathi, nor the extreme southern atoll of Addu (once famous for its military base). A new

- guide to Maldivian materials has been recently published by Andrew D. W. Forbes, 'Archives and Resources for Maldivian History,' *South Asia*, vol. 111, no. 1, 1980, pp. 70-82. Notable references are J. Stanley Gardiner, ed., *The Fauna and Geography of the Maldive and Laccadive Archipelagoes*, Cambridge, vol. 1, 1903, vol. 2, 1906; C. W. Rosset, 'The Maldive Islands,' *The Graphic*, October 16, 1886, pp. 413-416, and 'On the Maldive Islands,' *Journal of the Anthropological Institute*, vol. 16, 1887, pp. 164-174; and especially H. C. P. Bell, *The Maldive Islands: An Account of the Physical Features, Climate, History, Inhabitants, Productions, and Trade*, Colombo, 1883, and Albert Gray and H. C. P. Bell, eds., *The Voyage of François Pyrard of Laval to the East Indies, the Maldives, the Moluccas, and Brazil*, London, 2 vols., 1887, 1890. These latter two are the best historical sources on the islands.
18. Schneider, *Muschelgeld-Studien*, p. 102; E. von Martens, 'Ueber verschiedene Verwendungen von Conchylien,' *Zeitschrift für Ethnologie*, Berlin, 1872, p. 65; Henri Labouret, 'L'échange et le commerce dans les archipels du Pacifique et en Afrique tropicale,' in Jacques Lacour-Gayet, ed., *Histoire du commerce*, Paris, 1953, Tôme III, *Le commerce extra-Européen jusqu'aux temps modernes*, p. 108. Foa says (*Le Dahomey*, p. 149), 'il existe une variété de cauris plus petits de moitié et plus blancs, qu'on appelle *cauris de Manille*.' (They served relatively more often as jewelry in Africa than did the Maldivian variety.) 'Dutch Gentleman' in his rare pamphlet of 1754 says the Philippine shells in the European trade 'don't come up to the Maldivian, either in Colour or Clearness.' Dutch Gentleman, *Voyage to the Island of Ceylon on Board a Dutch Indiaman in the Year 1747*, London, 1754, p. 21.
 19. For example in the Seychelles, where *moneta* is classified as 'common' but six other varieties are classified in the two groupings of greater occurrence, 'quite common' and 'abundant,' with *Cypraea annulus* 'easily the most abundant of the cowries of Seychelles.' See David Slimming and Alan Jarrett, *The Cowries of Seychelles*, London, 1970, pp. 9-11.
 20. See M. Hiskett, 'Materials Relating to the Cowry Currency of the Western Sudan, II,' *Bulletin of SOAS*, vol. XXIX, part 2, 1966; Bell, *Maldive Islands*, p. 24; Gray [Pyrard], vol. II, p. 428; Henry Yule and A. C. Burnell, *Hobson-Jobson*, London, 1968, p. 270; and Heimann, 'Small Change,' p. 2.
 21. Yule and Burnell, *Hobson-Jobson*, p. 270; Gray [Pyrard], p. 430; Bell, *Maldive Islands*, p. 24.
 22. Schneider, *Muschelgeld*, p. 110.
 23. Yule and Burnell, *Hobson-Jobson*, p. 270.
 24. *Ibid.*, p. 270, quoting the French translation *Voyages d'Ibn Batoutah*, by C. De Fremery and B. R. Sanguinetti, Paris, 1853-1858, vol. IV, p. 122. See also Gray [Pyrard], p. 444, and Bell, *Maldive Islands*, pp. 24-25, 117.
 25. Noted by Mas'udi in c. 943, and by Marco Polo in the thirteenth century. See Yule and Burnell, *Hobson-Jobson*, pp. 269-270; and Heimann, 'Small Change,' pp. 1-3. Heimann notes that the first mention of cowries in India is in the fifth century (*Travels of Fah-Hian*, trans. S. Beal, London, 1969, p. 55) and the seventh century (*Chau Ju-Kua*, trans. F. Hirth and W. Rockhill, St. Petersburg, 1911, p. 113). Von Martens, 'Verwendungen,' pp. 66, says sixth century. In addition to their use as money in Bengal, they found employment there in the manufacture of a type of cement. 'Il n'est pas inutile, peut-être, de dire que le cauris sert, au Bengale, à faire du stuc; on le pile dans un mortier après l'avoir calciné, en y mélangeant du lait caillé et du sucre. Cette pâte, lorsqu'elle est étendue sur les murs et polie, imite parfaitement le marbre.' Foa, *Le Dahomey*, p. 148. The shells were also widely used for ornamentation.
 26. The early import of cowries to West Africa, where they had 'continuous use, at least in the major markets of the middle Niger area from at least the eleventh century,' is surveyed by Marion Johnson, 'The Cowrie Currencies of West Africa,' *Journal of African History*, part I, vol. XI, no. 1, 1970, pp. 17-49. For the quotation, see part I, p. 33. Possible other foreign markets for Maldivian cowries are mentioned by Einzig, *Primitive Money*, and Jackson, 'Shells as Evidence.'
 27. From Sulayman al Tajir in the ninth century: 'Their money consists of cowries,' though Mas'udi c. 916, 'the queen has no other money but cowries,' Idrisi in the twelfth century, 'commerce is carried on by means of shells,' to Ibn Battuta in the fourteenth, 'The money of the Islanders consists of cowries (al-wada'). . . . Bargains are struck through [their]

- medium... Gray [Pyrard], vol. II, pp. 429-432, 443; Yule and Burnell, *Hobson-Jobson*, p. 270. Typically tax payments were made in the shells, as noted by Pyrard, p. 228. They were used for distribution at funerals and weddings, and in games. See Pyrard, p. 441, and C. W. Rosset, 'On the Maldiv Islands,' *Journal of the Anthropological Institute*, vol. 16, 1887, pp. 170, 173. Other monies used in the Maldives included especially the silver larin. See particularly Gray [Pyrard], pp. 232-236 for a comprehensive discussion.
28. Schneider, *Muschelgeld*, p. 112; Gray [Pyrard], p. 237.
 29. The rice trade was reported by Ibn Battuta in the fourteenth century, Pyrard in the early seventeenth, and C. W. Rosset in the nineteenth. 'The islanders barter [cowries] to the people of Bengal for rice ...' says Battuta; Yule and Burnell, *Hobson-Jobson*, p. 270; Pyrard makes many mentions of the rice trade, for example pp. 78, 240, 242, 327; and Rosset, 'On the Maldiv Islands,' pp. 166-167, published 1887, says half the food supply, rice for the most part, is imported from India. Heimann, 'Small Change,' pp. 3-4, posits a steady increase in this rice dependence.
 30. Sulayman: 'A coco-branch is thrown into the water, and the cowries attach themselves to it.' Mas'udi: 'The queen ... orders her islanders to cut coco-branches with their leaves, and to throw them upon the surface of the water. To these the creatures attach themselves. ...' Alberuni: 'They gather cowries from the branches of the coco-nut palms they plant in the sea.' Idrisi: 'They throw into the sea pieces of coco-wood, and the shell-fish attach themselves thereto.' Gray [Pyrard], vol. II, pp. 429-432. João de Barros in his 1563 history of the Portuguese in India (*Decada III*, liv. III, c. iv, p. 312) writes 'Now the manner in which the islanders gather these shells is this: - they make large bushes of palm leaves tied together so as not to break, which they cast into the sea. To these the shell-fish attach themselves in quest of food; and when the bushes are all covered with them, they are hauled ashore and the creatures collected.' The translation is from Gray [Pyrard], vol. II, p. 485. Captain Alexander Hamilton wrote in 1727 that 'the Couries are caught by putting Branches of Cocoa-nut Trees with their Leaves on, into the Sea, and, in five or six Months, the little Shell-fish sticks to those Leaves in Clusters....' Hamilton, *A New Account of the East Indies*, ed. Sir William Foster, London: 1930, p. 192. Finally Foa wrote in 1895 that the cowries prefer to fix themselves on vegetable debris. The inhabitants thus cast whole coconut trees into the sea, and pull them in some days later laden with cowries. Foa, *Le Dahomey*, p. 147. Note the reference here to 'some days' ('au bout de quelques jours') in contrast to Hamilton's 'five or six months,' a point that will have to be cleared up with field work. The 'tree method' had apparently passed out of use long before Foa's account was written.
 31. Bell, *Maldiv Islands*, p. 87. Note that a packet of 12,000 shells was the standard measure called the Kotta, weighing about 25 pounds. An old miniature of cowrie-fishing was said to be in the collection of Jean, duc de Berry. [In the Book of Hours, perhaps?] Foa, *Le Dahomey*, p. 147. The author has not seen it.
 32. Gray [Pyrard], vol. I, p. 236. The Abbé Prévôt writing in 1780 also mentions the lunar cycle of fishing, and wading by women. He is probably following Pyrard. Prévôt, (Abrégé de) *Histoire Générale des Voyages*, Paris, 1780, p. 82.
 33. Captain W. F. W. Owen, 'On the Same Subject' [The Geography of the Maldiva Islands], *Journal of the Royal Geographical Society*, vol. II, 1832, pp. 82-83. The story is repeated by John E. Hertz, 'Ueber Verwendung und Verbreitung der Kauriemuschel,' *Mitteilung der Geographische Gesellschaft in Hamburg*, Hamburg, 1881, p. 25. 'An Officer Late of the Ceylon Rifles' who visited the Maldives in the 1870s also discussed the baited line method, but obviously he was following Owen's account. An Officer Late of the Ceylon Rifles, *Ceylon*, London, 1876, p. 418.
 34. Gray [Pyrard], vol. II, p. 430.
 35. *Ibid.*, vol. I, p. 237, vol. II, p. 444.
 36. *Ibid.*, vol. II, p. 485; John Marshall, *Notes and Observations of East India* (edited S. A. Khan, as *John Marshall in India*), London, 1927, p. 416; Hamilton, *East Indies*, p. 192.
 37. Bell, *Maldiv Islands*, p. 87. One author went badly astray in his account of both collection and preparation. 'Dutch Gentleman,' p. 19, says they are found 'not only on the Shore, but in the very Ground, being probably deposited there at the Time of the Flood, and left there when the Ocean receded from the Land.'
 38. Owen, 'Geography of the Maldiva Islands,' p. 83.

39. There are details in a paper probably written by the Captain of the *Britannia*, arriving Hooghly, 1 July 1683. 'Cowries are to be had at any time of ye year, but in Novbr. and Decmr. most, by reason they are brought to ye *King's Island* to Lade ye *Bengall* Shipping. . . . [T]hey have Touds. of Tuns buried in ye ground for Store (and for want of Ware-houses) in this Island wch. is not above 4 English miles in Circuit.' H.C.P. Bell, 'Excerpta Maldiviana: No. 4. A Description of the Maldiv Islands circa A.C. 1683,' *Journal of the R.A.S. (Ceylon)*, vol. XXX, no. 78, 1925, p. 135. William Hedges wrote of a visit of March, 1685, *The Diary of William Hedges, Esq., 1681-1687*, London, 1887, vol. I, p. 192, 'I saw the Houses, which were Magazines for ye cowries that were taken for ye King.' The captain of the *Britannia* (?) thought that over 90% of the processed cowries were actually kept on another island to guard against a piratical descent, but his arithmetic is suspect as this would mean at least 50,000 tons stored, an unacceptably high figure. Bell, 'Description,' p. 135.
40. Bell, 'Maldiv Islands,' p. 87; and 'Description,' pp. 135, 140. In a letter from Ceylon dated 11 May 1721 (VOC 1965 KA 1848), Gov. Rumpf makes reference to corners of the cowrie packages sticking awkwardly above the horizontal layer of cargo, which must refer to the *Kottas* loaded in Bengal or Ceylon for shipment to the Netherlands.
41. Hamilton, *East Indies*, p. 192.
42. *Ibid.*, and Bell, 'Maldiv Islands,' p. 102.
43. Reginald Heber, *Narrative of a Journey through the Upper Provinces of India from Calcutta to Bombay, 1824-1825*, London, 1828, pp. 3, 19-20.
44. Bell, 'Maldiv Islands,' p. 102. João de Barros notes navigation only 'during the monsoons, which are seasons of fair winds, regular in their direction, for three months at a time.' For the remainder of the year 'they do not go to sea.' Gray [Pyrard], vol. II, pp. 482-483. Notice the discrepancy between these accounts and the earlier statement by the Captain of the *Britannia* (?) that the Bengal shipping departed in November and December; but all clearly point to annual sailings when winds were favorable.
45. Bell, 'Description,' p. 135; 'Maldiv Islands,' p. 102. Rosset, 'On the Maldiv Islands,' says there was a 12% tax on imports only, paid in rice, cloth, and cowries.
46. Gray [Pyrard], vol. II, pp. 429, 430, 432. See also Heimann, 'Small Change,' p. 2.
47. M.A.H. Fitzler, 'Die Maldiven im 16. und 17. Jahrhundert,' *Zeitschrift für Indologie und Iranistik*, vol. 10, 1935-1936, see especially pp. 223-225, 227. Ali's farmed monopoly expired in 1518. A 'Maldivensultan abgeschlossenen Handelsmonopols' wrote Fitzler, p. 224.
48. H.C.P. Bell, 'Excerpta Maldiviana. No. 11. Dutch Intercourse with the Maldives: Seventeenth Century,' *Journal of the R.A.S. (Ceylon)*, vol. XXXII, no. 85, 1932, see pp. 235-236. The instructions were dated 1671.
49. Bell, 'Description,' p. 135.
50. Hedges, *Diary*, vol. I, p. 192.
51. Philaethes, *The Boscawen's Voyage to Bombay*, 1750, p. 52, quoted by Yule and Burnell, *Hobson-Jobson*, p. 271.
52. Prévôt, *Histoire*, p. 82. 'Le rois mêmes et les seigneurs font bâtir exprès des lieux, où ils conservent des amas de ces fragiles richesses, qu'ils regardent comme une partie de leur trésor.'
53. Hertz, 'Ueber Verwendung und Verbreitung der Kauriemuschel,' *Mitteilung der Geographische Gesellschaft in Hamburg*, Hamburg, 1881, pp. 14-15.
54. Rosset, 'On the Maldiv Islands,' pp. 166-167.
55. *Ibid.*, p. 168; and Gray [Pyrard] where the system of nobility is discussed at length in various chapters. Heimann, 'Small Change,' points to the prestige value of eating imported rice as a prop to the hierarchy of status, p. 4.
56. Bell, 'Maldiv Islands,' p. 26; Gray [Pyrard], vol. II, pp. 478, 484.
57. Gaspar Correa, *Lendas da Índia*, Lisbon, 1858-1864, I, i, p. 341 (trans. Burnell and Yule). See also contemporary notices of the Bengal trade by Sassetti, 1586, Bernier, c. 1664, and others in Yule and Burnell, *Hobson-Jobson*, p. 270.
58. Gray [Pyrard], vol. I, pp. 237-238.
59. *Ibid.*, pp. 78, 240, 299.
60. Hedges, *Diary*, vol. I, p. 95; Bell, 'Maldiv Islands,' p. 102.
61. So stated by Thomas Bowrey, *A Geographical Account of the Countries Round the Bay of*

- Bengal, 1669 to 1679*, Cambridge, 1905, p. 152.
62. Yule's statement in Hedges, *Diary*, vol. III, p. cxciv. Balasore had been the chief Danish factory but that was later moved to Tranquebar. Bowrey, *Bay of Bengal*, p. 183.
 63. Bowrey, *ibid.*, p. 162, where there is an excellent description of Balasore..
 64. Hamilton, *East Indies*, pp. 217-218; Bowrey, *Bay of Bengal*, p. 162.
 65. Hamilton, *ibid.*, pp. 192-193, 218.
 66. Sukumar Bhattacharya, *The East India Company and the Economy of Bengal*, London, 1954, pp. 124, 189. The date 1738 is given for one such statement of Balasore's role.
 67. Bowrey, *Bay of Bengal*, p. 179, and a notice of a Balasore merchantman in the Maldivian trade, p. 75.
 68. Om Prakash, 'The European Trading Companies and the Merchants of Bengal, 1650-1725,' *Indian Social and Economic History Review*, vol. 1, no. 3, 1963/1964, especially pp. 38-45. The trade was apparently an increasing one. Prakash's figures show departures for the Maldives 1680-1684 averaging 3.5 annually, with the figure 8.3 for six years between 1697 and 1707. *Ibid.*, p. 40.
 69. Marshall, *East India*, p. 419.
 70. Bowrey, *Bay of Bengal*, p. 219.
 71. All quoted by Bhattacharya, *Economy of Bengal*, pp. 86, 89, 124. See also Hamilton, *East Indies*, p. 218.
 72. Prakash, 'European Trading Companies,' pp. 54-55.
 73. *Ibid.*, p. 47.
 74. Correa, *Lendas*, vol. I, pp. 341-342. Also see H. C. P. Bell, 'Excerpta Maldiviana: No. 10. The Portuguese at the Maldives,' *Journal of the R.A.S. (Ceylon)*, vol. XXXII, no. 84, 1931, pp. 78-79; 'Maldivian Islands,' p. 26; and Fitzler, 'Die Maldiven,' p. 219.
 75. Heimann, 'Small Change,' p. 4; Fitzler, 'Die Maldiven,' pp. 249-256. Note the passages by Pires and Barbosa referred to in Heimann's footnote 44.
 76. A. F. C. Ryder, 'An Early Portuguese Trading Voyage to the Forcados River,' *Journal of the Historical Society of Nigeria*, vol. I, no. 4, December 1959, especially pp. 301ff. Marion Johnson, 'The Cowrie Currencies of West Africa,' *Journal of African History*, Part I, vol. XI, no. 1, 1970, pp. 18-19.
 77. Quoted in Gray [Pyrard], vol. II, pp. 485.
 78. Fragmentary figures from West Africa do not support de Barros' numbers. For example, Alan Ryder in his *Benin and the Europeans, 1485-1897*, London, 1977, pp. 61-63 notes that 36 quintals or just over 4,000 pounds went to Benin in 1526, though he also states (p. 61) that 'by 1552, cowries were as important as manillas in the Portuguese trade with Benin - hence more important than in 1526.'
 79. Gray [Pyrard], vol. I, p. 237, quoting Nunes. Some shells were also obtained by tribute: four vessels of 150 tons were to be sent annually to Cochin, partly laden with cowries, in a sixteenth century treaty. Fitzler, 'Die Maldiven,' p. 235.
 80. Fitzler, *ibid.*, p. 225.
 81. *Ibid.*, pp. 226-229, 233, 248; Bell, 'Portuguese at the Maldives,' pp. 80-82, 88-91, 95-96.
 82. Fitzler, *ibid.*, pp. 233, 239-240.
 83. Schneider, *Muschelgeld*, p. 121.
 84. *Ibid.*, p. 244.
 85. *Ibid.*, p. 248-249; Bell, 'Portuguese at the Maldives,' p. 111.
 86. H. T. Fry, *The Mariner's Mirror*, vol. 53, no. 4, November 1967, especially the comments on the wreck of HMS *Cato*, 50, in the 1780s that led to an interest in charting.
 87. Hedges, *Diary*, p. 192. Assuming the '60 tunns of cowries' they bought equalled some 135,000 pounds, the forced purchase was a large one, more than half a normal year's trade to Britain according to the unpublished, preliminary, data collected by Marion Johnson at the PRO, Kew.
 88. *Ibid.*, p. 190. Hedges was then coming home on the *Recovery* after being superseded due to his running quarrel with Job Charnock.
 89. Prakash, 'European Trading Companies,' p. 62.
 90. Thomas Bowrey, *The Papers of Thomas Bowrey*, ed. R. C. Temple, London, Hakluyt Society, 1927, pp. 219-228.
 91. According to Reverend James Long, quoted in Yule and Burnell, *Hobson-Jobson*, p. 217.
 92. Narendra K. Sinha, *The Economic History of Bengal*, vol. I, p. 52, and noted by Heimann,

- 'Small Change,' p. 7. The French originally had a similar contract, but the war that soon followed with Britain kept the French from being an important factor in the Maldives. *Ibid.*
93. British and French ships were both buying cowries at Male in 1777. See Bell, 'Description,' p. 138.
 94. For some findings of the survey see James Horsburgh, 'Some Remarks Relative to the Geography of the Maldiva Islands, and the Navigable Channels (at present known to Europeans) which Separate the Atolls from Each Other,' *Journal of the Royal Geographical Society*, vol. II, 1832, pp. 72-80. See also Heimann, *ibid.*, p. 8.
 95. See J. S. Hogendorn and H. A. Gemery, 'Abolition and Its Impact on Monies Imported to West Africa,' in David Eltis and James Walvin, eds., *The Slave Trade and Abolition*, Madison, 1981.
 96. C. R. Boxer, *The Dutch Seaborne Empire 1600-1800*, Harmondsworth, 1973, pp. 26, 197; Kristof Glamann, *Dutch-Asiatic Trade 1620-1740*, Copenhagen and the Hague, 1958, pp. 22-23, 123.
 97. H. C. P. Bell, 'Excerpta Maldiviana, No. 11. Dutch Intercourse with the Maldives: Seventeenth Century,' *Journal of the R.A.S. (Ceylon)*, vol. XXXII, no. 85, 1932, p. 228.
 98. *Ibid.*, p. 229; and 'Maldiv Islands,' p. 98.
 99. *Ibid.*, 'Maldiv Islands,' p. 98.
 100. Sinnappah Arasaratnam, *Dutch Power in Ceylon 1658-1687*, Amsterdam, 1958, p. 209, quoting KA 799 fo. 310.
 101. Bell, 'Maldiv Islands,' p. 98. See also his 'Description,' p. 138 and 'Dutch Intercourse,' p. 228.
 102. 'Worthy of the mercenary spirit of the Dutch,' 'Maldiv Islands,' p. 30; 'The proverbial mercenary spirit of the Hollanders,' 'Portuguese at the Maldives,' p. 111.
 103. One such voyage by the *Cocatoe* (*Cockatoo*) in 1669 resulted in the purchase of 27,578 pounds, and another voyage is recorded in 1671. Bell, 'Maldiv Islands,' p. 99; 'Dutch Intercourse,' pp. 230-231.
 104. This trade had now gone on for 'several years consecutively' said Governor van Rhee in *ibid.*, 'Dutch Intercourse,' p. 232 and 'Maldiv Islands' p. 99.
 105. *Ibid.*, 'Maldiv Islands,' p. 99.
 106. *Ibid.*, pp. 99-100.
 107. *Ibid.*, 'Dutch Intercourse,' p. 239; T. W. Hockly, *The Two Thousand Isles: A Short Account of the People, History and Customs of the Maldiv Archipelago*, London, 1935, p. 75, quoting from a letter by Governor Loten to incoming Governor Schreuder; VOC 1976 KA 1868, 5 March 1722.
 108. Bell, 'Maldiv Islands,' p. 99, 'Dutch Intercourse,' p. 138.
 109. *Ibid.*, 'Dutch Intercourse,' p. 228; 'Description,' p. 138; 'Maldiv Islands,' p. 98.
 110. *Ibid.*, 'Maldiv Islands,' p. 100. The letter says 'Bellapor and Bengal' in Bell's quoted version, but that must be a misprint [in 1734 or 1883] for Balasore.
 111. A proportion of the VOC return ships would start from Ceylon instead of Batavia, six of 20 in 1720 for example. Jean Pierre Ricard, *Le Négoce d'Amsterdam*, Rouen, 1723, p. 382. The warehouses ('spacious') and the British/French buyers are mentioned by 'Dutch Gentleman,' *Voyage*, p. 22. There is a new paper by Marion Johnson and Jan Hogendorn, 'The Intra-European Cowrie Trade,' to be submitted for publication, which examines the Dutch market.
 112. Bell, 'Maldiv Islands,' p. 101.
 113. Hedges, *Diary*, vol. I, p. 89.
 114. Bell, 'Maldiv Islands,' pp. 99, 101; Heimann, 'Small Change,' pp. 6-7.
 115. VOC 1876 KA 1868.
 116. Bell, 'Maldiv Islands,' p. 31; J. Beckmann, *Vorbereitung zur Waarenkunde*, Göttingen, 1793, p. 361, for the Danish figure.
 117. Kristof Glamann, *Dutch-Asiatic Trade 1620-1740*, Copenhagen and the Hague, 1958, p. 25.
 118. *Ibid.*, and Don Weyers, *Opdracht 14 VOC 2304/KA 2196*, Typescript, University of Leiden, October 1978.
 119. 'Shipping costs were often nil,' says Heimann, 'Small Change,' p. 5.
 120. See VOC 1956 KA 1848, May 11, 1721.

121. Gray [Pyrard], p. 240.
122. Johnson, 'Cowrie Currencies,' Part I, p. 20.
123. Holden Furber, *John Company at Work*, Cambridge, 1948, p. 289. The transition is discussed by Sir Henry Yule in his notes to *The Book of Sir Marco Polo*, London, 1929, vol. II, p. 74.
124. Johnson 'Cowrie Currencies,' Part I, pp. 22-23.
125. John E. Hertz, 'Ueber Verwendung und Verbreitung der Kauriemuschel,' *Mitteilung der Geographische Gesellschaft in Hamburg*, Hamburg, 1881, is a classic on this subject. The story is fully surveyed by Johnson, Part I, p. 23ff.
126. *Ibid.*, pp. 14-15.
127. Bell, 'Maldiv Islands,' p. 104. Marion Johnson has discussed at length the cost advantage and hence profitability of *annulus* once West Africans overcame their reluctance to accept the East African shells. Part I, pp. 23-25, and Hertz, 'Kauriemuschel,' p. 15ff.
128. Johnson, 'Cowrie Currencies,' Part I, p. 23; and Heimann, 'Small Change,' p. 7.