

nuts though other agricultural products may be substituted for the beads.<sup>14</sup>

No areca nuts are "imported" or "exported" by the Hanunóo, although Christian chewers in the nearby lowlands frequently ask them to bring in small lots for which little or no payment is made. In more densely populated betel-chewing areas, areca nuts have been traded extensively for centuries. Java, for example, was exporting nuts to China more than 700 years ago.<sup>15</sup> Malaya, Sumatra, Java, and Borneo have remained the hub of the areca-exporting area down to the present and large annual shipments<sup>16</sup> are still made to countries north and west of this region. In India alone over 100,000 tons of areca nuts are used annually.<sup>17</sup> While of considerable importance in the internal commerce of the Philippines<sup>18</sup> areca fruit rarely enters into the foreign trade of the archipelago.

The Hanunóo keep areca nuts in open containers. Whole fruits last for several weeks even if they are simply dropped into a wide-mouthed *bay'ung* shoulder bag (fig. 2) or into a smaller betel ingredient basket, *kamam'an* (fig. 2), kept inside the *bay'ung*. Men and women of all age-groups carry these or similar containers with them most of the time.

When areca fruits are scarce, as in November, or whenever his supply of nuts runs out while in the jungle or far from any settlement, a Hanunóo chewer can substitute anyone of a number of vegetable substances obtainable from eight different plant sources consisting of five forest trees and three palms only one of which is a cultivate. In order of preference these are as follows:

#### TREES:

1. *balūkuk*, *Artocarpus ovatus* Blanco, (bark). A small chunk of the reddish inner bark, especially if cut from a buttress just below the ground level or from a root, is by far the most common and most prized areca seed substitute. Between 5 and 10 percent of all Hanunóo chewers prefer the flavor of *balūkuk* to that of *būnga* and chew the former throughout the year, even when there is an abundant supply of areca nuts. Of all the alternative substances, this is also the most capable of coloring the chew a deep red. A *balūkuk* user keeps a hand-sized root section in

his shoulder bag so that a small bit of the cortex may be removed easily whenever he prepares a chew.

2. *kubi*, or *kubi-gūbat*, (i.e. Moro *kubi*; the common term *kubi* is also the name of the gummy sap obtained from large *balūkuk* trees), *Artocarpus* sp., (bark).
3. *karupising*, especially *karupising buladlad*, *Breynia cernua* (Poir.) Muell.-Arg., (bark). This substance is frequently chewed with *karamūmug* bark, a substitute for betel leaf (see below).
4. '*anapla*, *Albizia procera* (Roxb.) Benth., (bark).
5. *tipūlu'*, *Artocarpus blancoi* (Elm.) Merr., (fruit or bark).

#### PALMS:

6. *pāwa'*, *Pinanga* sp. (seeds).
7. *tagulsi'*, *Pinanga* sp. (seeds).
8. *niyug*, *Cocos nucifera* L., (fruits). The fresh, excessively acrid cores of very young coconut fruits are chewed only by children.

An areca seed contains seven alkaloids including the active toxic principle arecoline (C<sub>8</sub>H<sub>13</sub>NO<sub>2</sub>) which has anthelmintic properties, tannin which accounts for its astringency (especially in green nuts), fat, and some sugars. The results of various studies concerned with the chemical analysis and pharmacological use of areca fruits are conveniently summarized by Quisumbing in his Medicinal Plants of the Philippines.<sup>19</sup> Areca nut is not used medicinally by the Hanunóo except as a part of the betel chew (see below).

Among the Hanunóo and many other betel-using peoples, longitudinal strips cut or ripped from the fibrous areca husks are used extensively to clean the teeth (*pannusnus sa ngīpun*)<sup>20</sup> and for other brushing purposes.

Diced sections of the kernel are used occasionally as checkermen and children often make tops (*tītuk*) out of smooth-husked green nuts (kernel intact but with the pulpy base removed) by piercing the nut through the center with the midrib of a palm leaflet as a twirler. Empty husks (*luhub būnga*) make satisfactory molds for lead spindle whorls. To the Hanunóo, the only other important part of the areca