Fig. 3: Preparation of *roucou (bixa)* (POMET 1712 [1694])

d) **Preparation**

The outer skin (*testa*) of the seeds of *B. orellana* contains the colour principles (bixin and orellin). The dye varies from yellow, through brown and orange, to a deep vermilion ("infinita bixa, ques la color bermeja"; LAS CASAS, 1559 [1892: 39]). There are several methods of preparation. One involves mashing fresh or dried seeds in water (Fig. 3) and then allowing the pigment to precipitate. Alternatively, the seeds may be boiled in water to produce a thick paste which is then strained and dried in the sun. OVIEDO (1526, 1535), LAS CASAS (1559), VÁZQUEZ DE ESPINOSA (1628) and COBO (1653) refer to balls (*pelotas, pelotillas, bollas*) or cakes (*panecillos*) of *achiote* [23]. "Little cakes of *achiote*" are also mentioned in the Maya *Book of Chilam Balam of Chumayel*, probably compiled *ca.* 1500 (ROYS 1933: 95). They were apparently one of the first industrial products of the New World to be seen by Europeans. COLUMBUS's journal for October 15th, 1492, describes the sighting of a lone man in a canoe off the coast of Honduras: "He was carrying with him a piece of bread ... a gourd of water and piece of brown earth, powdered and then kneaded" (s. a.: fol. 13; 1960: 31).

Before being used as a paint or dye, *bixa* is mixed with an organic solvent – vegetable oil [24], animal fat [25], wax (GORDON 1957: 48), gum [26], or

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[23] FERNÁNDEZ DE OVIEDO Y VALDES (1526) 1950: 123, and (1535) 1959/I: 253; LAS CASAS (1559) 1958: 48; HERNÁNDEZ (1571–76) 1959/I: 28; VÁZQUEZ DE ESPINOSA (*ca.* 1628) 1942: 238; COBO (1653) 1956/I: 254.

[24] NIMUENDAJÚ 1946: 52; OBERG 1953: 24.

[25] ROTH 1924: 89, 422 (crab, turtle, crocodile); MURPHEY and QUAIN 1955: 37 (visceral fat of fish); YDE 1965: 60.

[26] FERNÁNDEZ DE OVIEDO Y VALDES (1535) 1959/I: 253 (*gomas*); BANCROFT 1769: 45 (gum of the mauna tree dissolved in lemon juice)); FARABEE 1918: 79 (*haiwa* gum [*Icica heptaphylla*]).