Hunter-gatherers data sheet

1. Description

1.1 Name of group/language family: Siriono, Tupi/Guarani

1.2 Location: Ibiato, currently the largest Siriono village, is situated about 50 km east of Trinidad (14 degrees 45 minutes south and 64 degrees 48 minutes west), the capital of the Beni Department in eastern Bolivia (6, p. 236). Located on the Llanos de Mojos in the Mamore and Guapore river basin, Ibiato lies at 14 degrees 49 minutes 48 seconds south and 64 degrees 22 minutes 45 seconds west (9, p. 105).

1.3 Population size (breeding, dialectal): Currently, the total known Siriono is 600, though unrecorded groups may exist on the Rio Guapore of Brazil and basins of Rios Blancos and Negro near the Brazilian border. Total known Siriono in 1941 was about 2,000 (9, p. 105). 415 habitants in 1996 census (CIRTB, Bolivian pamphlet from Mike Gurven). Ibiato may have had at one time over 600 inhabitants according to missionaries (5). Ibiato grew from 304 people in 1987 to 459 in 1993, a growth rate of 1.07 or a doubling rate of about 10 years. During this 7 year period there were 124 births, 14 deaths, 77 emigrants, 17 immigrants, and 19 unknown-outs (7, p. 41). Ibiato numbered 140 in 1938 (9, p. 105). The temporary government school/community at Casarabe had a population of 300 in 1940 which dropped to half that number in 5 years due to exploitation, maltreatment, and disease (1, p. 12).

1.4 Home range size (yearly, life): The Ibiato mission area includes approximately 7,000 hectares (4, p. 84). Of the 340 square kilometers delineated by Bolivian Presidential Decree as Siriono territory, 161 square kilometers are forest and 179 savanna.

1.5 Density (person/km2): In 1993 around Ibiato approximately 1.35 (=459/340). In 1938 approximately 0.41 (=140/340), calculated from 1.3 and 1.4 above.

1.6 History: Linguistically they are related to the Chiriguano, Guarayo, Guarani, and Yuqui. History inferred by Stearman (8, pp. 639-647) on the basis of language and other cultural affinities such as absence of stone tools and lack/fear of domesticated dogs, the Siriono and Yuqui are remnants of one of the pre-Columbian Guarani incursions from Paraguay into Bolivia. The Siriono and Yuqui have linguistic and cultural ties to the Guarayo, another Guarani lowland Bolivian group. It is likely that the Siriono and Yuqui are descendants of the Chiriguano branch of the Itatin Guarani (evidenced by residual slavery practices, shallow commitment to horticulture, and perhaps inability/"loss of know how" to make fire) who conquered and enslaved the Chane of lowland Bolivia. Later, the Chiriguano invasion into the Mojos region north of Santa Cruz, home to the Baure Indians, was ill-fated and ended in "defeat, dispersal, and isolation" (1, p. 640). History reinterpreted by Isaac (2, p. 137) as having a "cultural status" characterized by "population decimation, flight into a new ecological niche, acculturation to Whites and to other Indians and Afro-Americans, and a strategic but culturally corrosive shift from patrilocal to matrilocal residence." First European contact was in 1693 (1, p. 1). By the 1880s many Siriono were being settled in Franciscan missions, and widespread epidemics of smallpox and influenza had a serious effect on the Siriono in the 1920s. More recently tuberculosis has become a concern. Ibiato was founded in 1921 by American evangelical Protestants. In 1932 the Bolivian government allowed the mission to claim 30,000 ha as foraging habitat for the Siriono, but in the '60s when the mission collapses 1/3 of the land was invaded by cattle ranchers. In 1990, 60 Siriono walked from Trinidad to La Paz, 630 km, to demand of the Bolivian government to decree this land and 30,000 ha more. The title was granted in 1997 (9, p. 105-106).

2. Environmental Features

2.1 ecotype: Ibiato is in the heart of the Beni flood plain, a large expanse of seasonally inundated savanna. It is located on a Mojos Indian mound that rises above the surrounding pampa. Patches of gallery forest grow along rivers that dissect the expanses of grassland (6, p. 236).

2.2 temperature: The marked dry season is punctuated by cold fronts or surazos which drop temperatures as low as 4 degrees Celsius. Normally the cold months of May-July see low temperatures of around 10 degrees Celsius and highs of 30 degrees Celsius in the warm season (September-March) (6, p. 236). Polar winds can lower the ambient temperature 15-20 degrees in a matter of hours. The coldest recorded day in Trinidad during the 1991/1992 field season was 7.4 degrees in July, 1992 (7, p. 14).

2.3 rainfall: Annual rainfall averages 1800mm per year with heaviest rains falling between December and April (6, p. 236). In 1992, Trinidad registered 3192.4 mm of precipitation, an unusually wet year (7, p. 14).

3. Economy

3.1 Main carbohydrate staples (% of energy in diet): "The digging of roots and plants and the grubbing of worms are almost negligible occupations" (1, p. 65). The Siriono were horticulturists but the few and widely scattered crops they planted provided no surplus (6, p. 236). At Ibiato the Siriono practice small scale slash and burn agriculture, mostly corn, sweet manioc, plantains, bananas, rice, and sweet potatoes (7, p. 33). Wild fruits and nuts are rarely seen being consumed but the most common include palm fruit being available year around, other fruits seasonally, and palm heart occasionally (7, p. 33).

Here is Holmberg's (1, p. 48-50) breakdown of important foods by month of the year:

MONTH	PRIMARY ACTIVITIES	PRIMARY FOODS
January	Sedentary during wet season, hunting/gathering, no ag.	Game, palm heart, motacu (palm) fruits
February	Hunting/gathering, maize harvest, wild fruit harvesting	above+papaya and other fruits, maize, manioc
March	Hunting/gathering, no ag., peak wild fruit season	same as above
April	Hunting/gathering, still sedentary, little/no ag., wild fruit season almost over	same as above but little maize/manioc
May	Hunting/gathering, harvest of chuchio begins, becoming more nomadic, replant maize	same as above
June	Hunting/gathering, extended families become nomadic; hunting treks, fishing begins, almost no ag.	Game, palm heart, motacu fruits, little manioc, maize and papaya, some fish and wild honey
July	Usually "on the march", hunting and fising, no ag.	Game and fish, palm heart, wild honey, motacu fruits, cusi nuts, some camotes
August	"On the march", may return to eat planted camotes and fresh maize planted in May; hunting/fishing/gathering and drinking parties (b/c of the honey availability)	Game and fish, palm heart, wild honey, camotes, maize, cusi nuts, motacu fruits and another fruit-mbia
September	same as above	similar but turtle eggs, little manioc/maize
October	Hunting/gathering, clearing small plots of land, select residence site for rainy season	Game and fish, palm heart, motacu fruits, some camotes, little manioc/maize/papaya
November	Hunting/gathering, most planting occurs—maize, manioc, cotton, tobacco, but ag. interferes little with hunting and gathering, fishing stops b/c of increased water levels and turbidity	Game, little fish, palm heart, motacu fruits, few other veg.
December	Full on rainy season, no ag. work, hunting and gathering only important activities, no fruits yet ripe	same as above but no fish

3.1.1 extraction rates upon encounter—no data

3.1.2 density or distribution pattern

3.2 Main protein lipid sources (% energy, % P-L): "Hunting continues to provide almost all of the community's animal protein intake, a tradition not likely to be replaced by animal husbandry" (4, p. 98). Most heads of families do own chickens and pigs with only several families owning cows (7, p. 34).

The following table is compiled from 7, p. 53, Table 4-1a, Townsend's total-of-85-days study in 1991-92 of mammals harvested by the Siriono:

ANIMAL SUBORDER	*Genus species*	n	TOTAL WEIGHT (kg)
Rodentia	*Dasyprocta variegata*	167	552.77
	Coendu prehensilis	41	176.3
	Sciurus spadiceus	11	4.95
	Agouti paca	104	756.08
Xenarthra	*Dasypus novemcinctus*	642	2433.18
	Euphractes sexcinctus	27	86.4
	Priodontes maximus	1	60
	Tamandua tetradactyla	27	116.64
	Myrmecophaga tridactyla	8	114.4
Artiodactyla	*Tayasu pecari*	139	3965.67
	Tayasu tajacu	200	3062
	Mazama americana	26	772.72
	Mazama gouazoubira	21	362.88
	Blastoceros dichotomus	70	5600
Perissodactyla	*Tapirus terrestris*	5	750
Primates	*Cebus apella*	20	59.6
	Aoutus sp.	12	13.8
	Saimiri boliviensis	1	1
	Callithrix argentata	7	2.66
Carnivora	*Nasua nasua*	246	801.96
	Potos flavus	1	1.6
	Felis sp.	1	3.5
	Felis pardalis	3	39
TOTALS		1780	19737.11

The reptiles that were harvested include 316 turtles and tortoises (weight=1139 kg) and 9 caiman (56.52 kg) (7, p. 55, Table 5-5b). Birds killed numbered 198 for a total weight of 272.81 kg (7, p. 57-58, Table 4-1c). Fish harvested numbered 53,113 weighing 6278.95 kg (7, p. 67, Table 4-4). These numbers indicate that the Siriono harvest much more game than fish with 93% of the game weight being mammalian. The most important mammalian prey are the 6 species of ungulates (7, p. 82).

3.2.1 extraction rates upon encounter---no data

3.2.2 density or distribution pattern: The following table includes harvest biomass by habitat for Siriono wildlife (7, p. 96, Table 5-1):

Harvested Resource	Forest (kg)	Savanna (kg)
Fish		10988.16
Game	23681.08	13428.42
Total biomass	23681.08	24416.58
Biomass harvest rate (kg/km^2)	134.55	100.89

3.2.3 Search Party/Pursuit group size for major PL resources: Townsend's data indicate that of the 871 successful hunting trips, 511 had 2 or more participants and 360 were solitary. The modal number of participants in group hunting trips was 2. Trips greater than 8 participants involved the gathering of

river turtles during the dry season (7, p. 51). Hunters go alone, in pairs, or groups of 6-7 if pursuing peccary troops or spider monkey bands (1, p. 51).

3.3 Dietary intake: "Collecting ranks next to hunting in importance" (1, p.63). The per capita daily protein consumption during Townsend's study was 12.8 grams of fish and 42.7 grams of game for a total of 55.6 grams. For comparison with other SA groups see 7, p. 78, Table 4-5.

Holmberg gives the following from a three-month study of meat consumption for 50 adults (1, p. 74):

MONTH (1941)	Pounds/ind/day	kg/person/day
August	.56	.25
September	.53	.24
October	.36	.16

3.4 Special tools and techniques: The Siriono are famous for the incredible length of their longbows (over 2 meters) made from chonta palm wood and arrows of reed, bamboo, and chonta (4, p. 99). During the rainy season, caiman are hunted by night with flashlights and canoes using .22 rifles to shoot at the eyes reflecting the light (6, p. 236). Of the 46 adult men in Townsend's study, 21 of them owned a firearm (7, p. 38). Holmberg reports---near perfect imitation of calls made by birds, peccaries, tapirs, and monkeys to bring game within range (1, p. 52). If a hunter runs out of arrows while hunting, he often continues the attack with a club picked up randomly or made in the forest (1, p. 57).

3.5 Storage: Tortoises are relatively abundant with hunters occasionally returning with 8-10 in a day. These are often tied up to trees and slaughtered at a later date. Under such circumstances a hunter may lay around in his hammock for an entire week (1, p. 82). No foods are preserved or stored for more than several days, not even horticultural products (ibid.).

3.6 Sexual division of production (% calories, %PL by males and females): Five adult females made kills (number of kills unknown). The 45 adult male hunters, 6 young males, and 11 male children made the rest (7, p. 51).

3.65 Cooperation during production (% time in cooperation, % cals produced cooperatively, do men hunt solitarily or together, etc.) Hunters often go out in pairs or groups of 6-7 if pursuing peccary troops or spider monkey bands (1, p. 51). Any interesting example of cooperation is when men will climb trees with only their bows to get at arboreal prey. Another hunter on the ground will shoot an arrow at low velocity so that the hunter in the tree can catch it, and then shoot the prey item (1, p. 53).

3.7 Age divisions of production (production by children and elderly): Approximately 20% of the population (ages 20-55) support the other 80%, children and elderly (7, p. 41).

3.8 Non-foraging economy: Paraguayan caiman skins are sold to traders; 155 were killed in 5 days during the peak season (6, 238). Little time is spent in horticultural activities except at sowing and planting episodes (1, p. 222).

Time use:

3.8.1 Men's food acquisition work: (hr/day) The most persistent hunter (in 1941, 1, p. 75) hunted for 16 out of 31 days in August, 12 of 30 in September, and 19 of 31 in October. The majority of hunters averaged 10-12 days per month. These results are from Holmberg's stay at Tibaera, but appear to hold under "aboriginal conditions" as well. That is, men hunt on average every other day and on odd days, rest, repair arrows, and eat, if food is available (1, p. 75-76). At least 25% of all days he comes home empty-handed (1, p. 249). Adult hunters spend about half their waking time wandering the forest looking for game. About 1/3 of the time they are alone, 1/3 with other hunters, and the other 1/3 on expeditions with their family (1, p. 222). When not on the hunt, men are apt to lie around in hammocks (1, p. 223). Men (along with women) gather, clear fields, plant, till, and harvest game (1, see SDOL table on p. 104). Men fish and extract honey (ibid.).

food processing—dressing game (1, see SDOL table on p. 104)

tool work—weapons, utensils, tools (1, p. 104)

housework—yes, and bridge-making (1, p. 104)

3.8.2 Women's food acquisition work—Along with men, women gather, clear fields, plant, till, harvest (1, p. 104).

food processing—cook and dress game (1, p. 104)

tool work-

housework—In contrast to men, women spend much of the day in the house (1, p. 223). One of the most time-consuming activities for women is the spinning of cotton thread and making hammocks (1, 18-20). Women also twine string, twine bowstrings, twine baby slings, carry water, collect firewood, extract clay, make pots, make pipes, weave mats, weave fire fans, weave baskets, make mead, prepare feather ornaments, string necklaces, cut and depilate hair (1, p. 104).

3.8.3 Children and Elderly food acquisition work

food processing

tool work

housework

Food sharing patterns:

3.9.1 Percent meat kept by nuclear family of acquirer: food rarely shared beyond the extended family, when plentiful certain meat items saved for the elderly (1, p. 81), but when not plentiful generally does not leave the nuclear family (1, p. 150). A man is not supposed to eat the flesh from his own kill. However, continued breaches of this taboo are common (1, p. 79).

3.9.2 Percent collected kept by nuclear family of acquirer

3.9.3 Kin bias (close kin fraction/non-relative fraction): strong, see below

3.9.4 Other specified sharing patterns: Ungenerous and quarrelsome about food (1, p. 87, 151, 154); distribution does not follow a strict pattern (1, p. 88); "a man is not supposed to eat the flesh of an animal which he kills himself" (1, pp. 79-80) but this "rule" is rarely adhered to now, it may have once been enforced. Eating was often done in the middle of the night, so families could avoid being hounded by hungry kids and adults and eat in peace (1, p. 88). One informant reported:

> "When someone comes near the house, women hide the meat; they cover it with leaves. When you ask them where the meat is they tell you there is none. They eat in the night and steal off into the forest to eat. Women even push meat up their vaginas to hide it" (1, p. 155).

Each nuclear family cooks its own food with, typically, the head of the house getting the back of the animal, his wife the two hind legs, and other portions distributed without reference to status in the family (1, p. 88-89). A wife supervises the distribution of meat, so that if any part of her husband's catch is missing she suspects him of carrying on an affair on the outside, which is, of course, grounds for dispute (1, p. 167). Headmen receive better shares than others as they are the better hunters and "thus in a better position than most to reciprocate for any favors done them" (1, p. 149). Whether food or sex with another's wife, "reciprocity is almost always forced, and is sometimes even hostile" (1, p.

151). Of 75 disputes documented by Holmberg, 44 were about food, 19 about sex, and 12 in the "other" category (1, p. 152). When Teko became sick with dysentary, he was brought large amounts of food every night by his relatives. At Ibiato, game, fish, and gathered plant products are "widely shared among villagers," but cultivated crops and purchased foods stay in individual households (6, p. 236). The Siriono maintain an "ongoing perception of reciprocity, of mutual obligation" with patrons in the trade of caiman skins that includes a suite of economic and social credits and debits (6, p. 242).

3.10 Food taboos: Pregnant women should not eat double fruits as it brings twins, which are smaller at birth and more likely to die. She should not eat animals with "turned" feet such as anteaters or sloths or she will have clubfooted children. Turtle eggs are excluded as well, the membrane bears resemblance to the womb. Intestines are forbidden; they might wrap around the infant's neck. Children should not eat ears of corn because their teeth will rot. None of the taboos are strictly adhered (4, p. 123). Tortoise liver is taboo to boys as they cause sterility (9, p. 108). With the exceptions of snakes and insects, everything is edible (1, p. 78). The harpy eagle, anteater, owl monkey, and howler monkey are supposed to only be eaten by the aged, though again disparity between the rule and practice is great (1, p. 80-81).

4. Anthropometry

4.1 Mean adult height (m and f): Holmberg's estimates are 5'4" for adult men, 5'2" for adult women (1, p. 7).

4.2 Mean adult weight (m and f)

4.3 Age specific child weight or height

5. Life History

5.1 Major causes of mortality (0-5, 5-60): High in the 1940s and 1950s as determined by interviews with older women who lost "significant numbers of children (two women lost all their children, a total of 18 infants)" due to various epidemics that swept through Ibiato (4, p. 77). Child survivorship is much higher now with most children being vaccinated against common childhood diseases (4, p. 123). Debt peonage was common prior to the 1952 Bolivian Revolution. "Those Siriono who did not die from disease and overwork remained tied to their patrons for life" (6, p. 241). Hard labor and exposure to diseases like tuberculosis, measles, chicken pox and mumps played roles in significant population decline during the early days of the reservation (7, p. 29). A crocodile surprised a man while fishing leaving a deep gash (he survived by poking an arrow into the crocodile's eye, 1, p. 60). Starvation never occurs though Holmberg reports that one band survived for 18-20 days on only palm heart and a few wild fruits (1 p. 72). Principal ailments include malaria, dysentary, hookworm, and skin diseases (1, p. 226).

5.3 Juvenile survival rate (0-1, 0-15 m and f)

5.4 Adult survival rate (15- 55, 15-70 m and f)

5.4b Average life span: discounting infant mortality, 35-40 years; one has 50% chance that parent's will not be alive when one reaches alpha (1, p. 220, 225)

5.5 Age first birth (m and f)

5.6 Completed family size (m and f)

5.7 Inter-birth-interval (f): unknown but at the age of one year, about 25% of food consists of food besides mother's milk. Children are rarely, if ever, weaned (fully) until 3 years of age, and occasionally 4-5 year olds still suckle (1, p. 200).

Marriage and parenting

5.8.1 Age first marriage (m and f): Unknown but woman is desirable if she is young with “big hips, good-sized but firm breasts, and a deposit of fat on her sexual organs” (1, p. 162).

5.8.2 Mean number of "divorces" (age 15-50, m and f)

5.8.3 Polygyny (%males, % females, mean and range of spouse #): A skilled hunter of chiefly descent would often become paba, an ererecua or leader and in time his hunting skill might gain him additional wives (4, p. 99). Men no longer have multiple spouses, but hunting still dominates their activities (ibid.). Spouse-swapping continues through the present. It the past, it was common for brothers to share the sexual favors of their wives (4, p. 126). Not uncommon for a man to have multiple wives (1, p. 126). A man may acquire 2, 3, or 4 more wives in a cross-cousin marriage through the sororate or levirate (1, p. 215). Of the four plural marriages, 3 were between 2 or more sisters and the fourth acquired through the levirate (ibid.).

5.8.4 Arranged marriage, bride purchase, evidence of coercion.

5.8.5 Percent of time spent in childcare

Sex ratio

Here is a table from a 1996 census (CIRTB, a pamphlet from Mike Gurven):

Age group	0-4	5-19	20+
Males	51	86	278
Females	43	79	293

Here is a table compiled from Townsend’s 1992 census. It is difficult to read the age pyramid so the adult numbers are not readily calculated (5, p. 32):

Age group	0-4	5-19	20+
Males	43	90	
Females	39	96	

Here is table compiled from the 1984 census list in source 4, pp.149-155, Figure 4:

Age group	0-4	5-19	20+
Males	22	46	70
Females	21	45	63

5.9.1 ratio (0-4 year olds) 1996=1.19; 1992=1.10; 1984=1.05

5.9.2 juvenile ratio (age 5-19) 1996=1.09; 1992=0.94; 1984=1.02

5.9.3 adult ratio (age 20+) 1996=0.95; 1984=1.11
overall sex ratio in 1984 was 138 males: 129 females, 1.07
In 1984 the age pyramid has a hourglass shape, probably due to outmigration of Siriono looking for working opportunities elsewhere and epidemics killing children in the 1940s and 1950s (4, p. 77)

5.9.4 sex biased homicide/neglect: Males are preferred (1, p. 202).

Warfare/homicide

5.10.1 Percent adult male deaths due to warfare

5.10.2 Outgroup vs ingroup cause of violent death (ratio). One man murdered his wife with his bow while in a drinking bout (1, p. 95). Another drinking incident landed one man in the fire, but he recovered (1, p. 96). The only other reported homicide was a man killing his sister by throwing a club at her from a tree. In both cases the murderers were banished but later returned to the band (1, p. 152). Warfare between bands does not exist. Where the Siriono have come into contact with whites and other Indians it is rarely the Siriono who do the raiding, though they are often raided (1, p. 157).

5.10.3 Percent children killed before age 10: Abortion and infanticide are not practiced (1, p. 174). Three miscarriages occurred as a result of women working beyond their endurance (ibid.). Even twins are both allowed to live, though one generally dies as a result of the mother not being able to attend to both (1, p. 185).

5.10.4 Reported causes of in-group and out-group killing: Before peaceful contact with Catholic and Protestant missionaries in the 1930s, hostile relations between local mestizos and Siriono was openly hostile leading to deaths on both sides in numerous occasions (6, p. 236).

5.10.5 Percent females in residential group captured by raiding: At least one Siriono woman had been captured by the Ayoreo (4, p. 131)

6. Social Organization and interaction

6.1 Residential group size: The Siriono moved over a large territory in small bands of about 20 people (6, p. 236). Today the one community that remains, the mission at Ibiato,consists of about 350 individuals (ibid.).

6.2 Mobility pattern: (seasonality) When lack of food or water forces bands to move, they usually only move 8-10 miles/day since they stop to rest, hunt, and gather at each resting spot. Movement of the entire band occurs around every 4-5 days (1, p. 106). Stearman concurs--Residence time was generally a few days or a week before game thinned out (4, p. 99). However, individual hunters may cover 40 miles/day (1, p. 107), and mean travel distance is around 15 mile/day (1, p. 222). Despite the great distance, a Siriono never gets lost in the jungle and always returns directly to the spot from which he started (1, p. 121). Trekking at Ibiato is limited by children going to school. Families rarely leave the settlement but men will, to hunt or for wage labor (7, p. 35-36).

6.3 Political system: (chiefs, clans etc, wealth or status classes): Yuqui and Siriono bands are headed by a leader (referred to by missionaries, Holmberg, and neo-Bolivians as a chief) who are elder males considered the “father” of the band (1, p. 646). Inheritance is generally patrilineal and the “father” position is often inherited. These headmen speak for the community at public meetings, seek consens regarding issues involving land and the Bolivian government, and tend to cooperate in dissolving quarrels between Siriono and non-Indians (9, p. 108).

6.4 Post marital residence: uxorilocal (9, p. 108), matrilocal (1, p. 143).

6.5 Territoriality? (defined boundaries, active defense)

6.6 Social interaction divisions ? (age and sex): preferred marriage partner is asymmetrical cross-cousin (1, p. 214).

6.7 Special friendships/joking relationships

6.8 misc. social relations.: the closest the Siriono have to a curandero or healer is a partero or male midwife (4, p. 122)

7. Ritual/Ceremony/Religion

7.1 Time allocation to RCR: No myths, folktales, or cosmology (1, pp. 116-118, 238-240), however, at Ibiato the older men perform the Hito-Hito, a circle dance and chant (4, p. 136). Yuqui and Siriono bands are headed by a leader (referred to by missionaries, Holmberg, and neo-Bolivians as a chief)

who are elder males considered the "father" or ererecua of the band (1, p. 646). Siriono do have a rich body of myth especially concerning the moon, they recognize souls of the dead and living. Forest mounds are considered to be souls of ancient headmen (9, p. 108).

7.2 Specialization (shamans, etc): no shamans or other ritual or medical specialists, no herbal medicines, rudimentary magical beliefs, "almost negligible" ceremonial life (1, p.220, 228, 230, 240). Reputed brujos or sorcerers are stripped and publicly whipped and escorted out of the village (4, p. 122).

7.3 Passage rituals (birth, death, puberty, seasonal): ritual-like mortuary practices include leaving a person's possessions with them (1, p. 234) but the skull of the deceased is often kept around the house (1, p. 236).

8. Other interesting features

1) No games, no musical instruments, very little decorative technique (1, p. 208, 110); no fire-making technique (loss occurred within living memory), no working of bone, horn, shell, stone, hide, or metal (1, p. 17, 22, 26); no watercraft, no domesticated animals (afraid of the dog) (1, p. 62, 69, 103), flimsy and inadequate shelters (1, p. 220)

2) "So little contact with the outside world that about the only items of Western technology found among them were two machetes worn to the size of pocket knives." (1, p. 263-264, xxii)

3) Features are "almost Negroid" in pigmentation and Europeans responsible for Caucasoid features such as pilosity (1, p. 7)

4) Adopted the cultivation of calabashes and tobacco within living memory (1, p. 67, 90)

5) "Any piece of bamboo serves as a knife" (3, p. 70 Figure 24)

6) 15% incidence of clubfootedness; 100% incidence of peculiar skin depressions on ears (1, pp. 8-9)

7) No clothing of any kind was made or worn by the Siriono (1, p. 38).

8) Whistling is used as forest communication to enable communication without scaring off potential prey. They actually carry on conversations through whistling (1, p. 52).

9) Not uncommon for a group of 4 people to eat a 60 lb. peccary in one sitting. A man may consumer 30 lbs in 24 hours if meat is abundant. Once two men ate six spider monkeys weighing 10-15 lbs each in a single day and complained of hunger that very night (1, p. 89). Additionally, men can carry up to 200 lbs for 10 miles "without exhibiting a great deal of fatigue (1, p. 107). And one more tidbit—every child of 10 knows the habits of animals including what they eat, where they sleep, when they have their young, etc.

10) As to avoid walking alone in the darkness, excreta are deposited directly outside Siriono huts. One must be careful when walking in the early morning (1, p. 98).

11) Supposedly, by the age of 12 a boy is already a "full-fledged hunter and is able to supply a household of his own with game" (1, p. 211).

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