

Hunter-gatherer data information sheet/questionnaire

Be sure to put reference number and page # after each entry.
[2 points for each quantitative entry, 1 pt for other.]

I. Description

1.1 Name of group and language family:

Penan; Kenyah language family (1:312)

1.2 Location:

Borneo

1.3 Population size (local group, breeding):

Total population 3200: Belaga District, Sarawak, 2100; Baram District, Sarawak, 800;

East Kalimantan, 300. (1:312)

1.4 Home range size (yearly, life):

Belaga District, the Silat watershed, Long Beku in Sarawak, and Bahau watershed of East Kalimantan. (1:312) Penan bands occupy foraging areas of approximately 1500 km²

1.5 Density (person/km²):

Belaga District: 0.11 person/km²

1.6 History

“The Penan know little about their history but probably they arrived in their current location by traveling through the Lio Matu area from Pejungan. The Penan have occupied settlements on the Niah, Suai, and Buk rivers since the early 19th century” (2:522).

II. Environmental Features

2.1 ecotype:

Extensive upland plateau of central Borneo, an area of wide valleys, steep ridges, and mountains rising up to 1830m. Rivers and streams flow through this landscape. Plateau is covered with dense primary tropical forest. (1:313)

2.2 temperature:

79°F Tropical Climate (3)

(seasonality)

| Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 78 | 78 | 80 | 80 | 80 | 80 | 80 | 78 | 78 | 78 | 78 | 78 |

2.3 rainfall:

13.8in/month (3)

(seasonality)

| Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|------|------|------|------|------|-----|-----|------|-----|------|------|------|
| 28in | 21in | 14in | 11in | 10in | 8in | 7in | 11in | 8in | 14in | 15in | 19in |

2.4 patchiness (temporal, spatial)

Most of plateau is covered with dense primary tropical forest. Mature secondary forest occurs adjacent to the largest rivers. (1:313)

III. Economy

3.1 Main carbohydrate staples (% of energy in diet):

Sago starch from the palm *Eugeissona utilis* (1:314) Occasionally plant rice and cassava (1:314)

3.1.1 return rates upon encounter

1500 kcal/h

3.1.2 resource abundance, density

Eugeissona utilis grows on ridges and slopes in clumps, reproducing both clonally and by seed. When the supply is depleted it is allowed to recover for several years. (1:314)

3.1.3 sharing patterns of carbohydrate staples

The household is the primary unit of production and consumption, but sharing among households is widely present. (1:314)

3.2 Main protein lipid sources (% energy, % protein-lipid)

Bearded pig (*Sus barbatus*), sambar deer (*Cervus unicolor*) and barking deer (*Muntiacus muntjac*) (1:314) Also gibbons and macaques (2:522) Consume fish when other game is unavailable.

3.2.1 return rates upon encounter

Since the bearded pig seems similar to the collared peccary if not bigger, assumed return rate greater than 65000 kcal/h. Deer seem to range in rates of 16000-32000 kcal/h.

Fish: 2100 kcal/h.

3.2.2 resource abundance, density

Conservation status of *Sus barbatus* : Vulnerable

3.2.3 sharing patterns of protein-lipid sources

The household is the primary unit of production and consumption, but sharing among households is widely present. (1:314)

3.2.4 Search Party/Pursuit group size for major protein-lipid resources

Hunting

Hunting with spears and dogs is the most common method of procuring game, though shotguns are also used. During periods of scarcity, Western Penan hunt with blowpipes, which are most effective for small game. (1:314)

3.3 Dietary intake: (calories per capita)

No info

(seasonality)

3.4 Special tools and foraging techniques:

Western Penan make iron tools. Blowguns spears, poisoned darts, fish poisoned with derris root. (2:522) Maintain a long-term harvesting strategy by avoiding a foreshortened harvest cycle: when the sago is depleted it is allowed to recover. (1:314) Adopted swidden agriculture, primarily planting rice and cassava. (1:314) Shotguns are becoming common to assist with hunting larger game. (2:522)

3.5 Storage:

No evidence of food being stored or preserved for more than the time it takes to spoil.

3.6 Sexual division of production (% calories, % protein-lipid by males and females)

3.6.5 Cooperation during production (% time in cooperation, % calcs produced cooperatively, do men hunt solitarily or together, etc.)

The utilization of dogs in the hunting process is used for larger game. (1:314) No other record of group size or sexual division of labor.

3.7 Age divisions of production (production by children and elderly):

3.8 Non-foraging economy:

Produce forest products such as camphor, tree resins, wild rubber, rhinoceros horn, bezoar stones, aromatic wood, and rattan mats and baskets. In exchange they have received metal, cloth, salt, and tobacco. Some Penan are very protective of their trading prerogatives with certain groups. (1:314) The Penan trade with the Kenyah people at the latter's long-houses three times annually giving such things as hornbill feathers, wild latex, damar, and anteater scales. In return they receive at a disadvantageous rate, spearheads, knives, cookware, jewelry, matches, etc. Goods they receive in trade are not shared among households. (2:522)

Time use:

3.8.1 Men's food acquisition work: (hr/day)

(seasonality)

food processing

tool work

housework

Penan houses are made of saplings, and roofed with palm leaves. (2:522)

3.8.2 Women's food acquisition work

(seasonality)

food processing

tool work

housework

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

(by game size)

3.9.2 Percent collected kept by nuclear family of acquirer

(by package size or resource)

3.9.3 Kin bais (close kin fraction/ non-relative fraction)

3.9.4 Other specified sharing patterns

3.10 Food taboos

Fish only eaten when necessary.

IV. Anthropometry

4.1 Mean adult height (m and f)

4.2 Mean adult weight (m and f)

4.3 Age specific child weight or height

4.4 % wasted/stunted, nutritional status

V. Demography and Life History

5.1 Major causes of mortality (0-5, 5-60)

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

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

5.5 Age first birth (m and f)

5.6 Completed family size (m and f)

The typical form of household is a 3 generation stem family, averaging between 6 and 10 persons. (1:314)

(range and variance, percent non-reproducers)

Western Penan bands occupy areas of approximately 1500km². Band territories overlap very little.(1:314)

5.7 Inter-birth-interval (f)

Marriage and parenting

5.8.1 Age first marriage (m and f)

Marriage does not entail ceremony or official approval. Ideally, the groom should pay a bride price of swords, blowguns etc. but this is rarely done. (2:522)

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

5.8.3 Polygyny (%males, % females, mean and range of spouse #)

Accepted but rare (2:522)

5.8.4 Arranged marriage, bride purchase, evidence of coercion.

Shelters at satellite camps are usually occupied by young couples and their offspring; second, in cases of community exogamous marriage, such family units practice reciprocal residence. Espouse a strong preference for community endogamy; in exogamous marriages, pressure is exerted on both spouses to remain in their natal communities. (1:314)

(kin preference)

First and second cousin endogamous marriage is common.

5.8.5 Percent of time spent in childcare

Sex ratio

5.9.1 ratio at birth

5.9.2 juvenile ratio (age 5-15)

5.9.3 adult ratio (age 25-40)

5.9.4 sex biased homicide/neglect

Warfare/homicide

5.10.1 Percent adult male deaths due to warfare

5.10.2 Outgroup vs ingroup cause of violent death (ratio)

5.10.3 Percent children killed before age 10

5.10.4 Reported causes of in-group and out-group killing

5.10.5 Percent females in residential group captured by raiding

VI. Social Organization and Interaction

6.1 Residential group size:

Prior to settling, Penan bands averaged between 60 and 200 members. (1:314) Western Penan mean group size of 125 members (seasonality)

6.2 Mobility pattern:

In the past, they maintained a settlement comprised of large base camps occupied for several months(4.2 months), and satellite camps established to process sago. Today most live a sedentary lifestyle where satellite camps are used less frequently. (1:314) (seasonality)

6.3 Political system: (chiefs, clans etc, wealth or status classes):

Kin-based community is the primary unit of social and political identity. Penan have a strong institution of leadership based on claims of aristocratic descent. (1:314) The Penan group has an official headman, but he is without much power. His office is often passed from father to son. There is no political organization above the level of the group. They have no formal means of ensuring social control. (2:522)

6.4 Post marital residence:

Post marital residence is with the wife's group for a year if different from the husband's group. (2:522) (first marriage, mid-life)

6.5 Territoriality? (defined boundaries, active defense)

Western Penan groups are strongly corporate, politically autonomous, and highly insular. Territory claimed and occupied by bands float over the landscape and are rarely static. Often disputes over territory arise as tho the legitimacy of certain aristocratic claims. (1:315) Land is not owned, but goods that the Penan trade with others are the property of the collectors. The Penan do not prevent other people from using the land that they themselves use. (2:523)

6.6 Social interaction divisions ? (age and sex)

Separate bands have continually fissioned through time, a process caused by differing demographics. (1:314)

6.7 Special friendships/joking relationships

6.8 misc. social relations.

A notable feature of Western Penan kinship terminology is an elaborate complex of "death-names." These names are titles, given to persons on the death of a relative. Though such practices are common in Central Borneo, the Western Penan complex, with 65 death names is the most elaborate yet documented. (1:314)

VII. Ritual/Ceremony/Religion

7.1 Time allocation to ritual, ceremony and religion

The Penan creator is Peselong. (2:523) Religion is primarily manifested through language: a rich, poetic vocabulary used in prayers and the everyday use of avoidance terms to keep malevolent forces at bay. They are concerned with the machinations of

**spirits and souls. They act in relation to a range of spirits who can overhear humans and cause them harm. Thus they employ an elaborate avoidance terminology to make statements repulsive to spirits, or to disguise from them planned foraging activities, movements, groups of people, and the presence of infants and illness. They believe that deceased kin pose no such threat. The souls of animals are seen as dangerous because of their capability to report to the Thunder deity who is said to be able to destroy entire communities. Western Penan assume death is a force attracted by references to the death of an individual, so any statement that might imply someone's death is avoided. (1:315)
(seasonality)**

7.2 Specialization (shamans, etc)

The Penan cure illness through a shaman (*dayung*) who removes illness-producing spirits from the sick. (2:523)

7.3 Passage rituals (birth, death, puberty, seasonal)

VIII. Other interesting features, anecdotes, etc.

References (list and label references with numbers: 1, 2, 3...)

- (1) Lee, Richard B. and Richard Daly, eds. The Cambridge Encyclopedia of Hunters and Gatherers. Cambridge, New York: Cambridge University Press, 1999
- (2) Bisht, Narendra S. and T. S. Bankoti. Encyclopedia of the South East Asian Ethnography. Enclave Dheli, India: Global Vision Publishing House, 2004
- (3) Discover Borneo Website. <http://www.goborneo.com/info/weather.htm>