

## OF 'CLIMBING PEANUTS' AND 'DOG'S TESTICLES', MESTIZO AND SHUAR PLANT NOMENCLATURE IN ECUADOR

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**ABSTRACT.**—A total of 411 vernacular names were recorded for 354 edible non-crop plant species that are used by nonindigenous mestizo people and indigenous Shuar people in southern Ecuador. Mestizo plant names, predominantly Spanish, are often formed through transposition, borrowing from native languages, or neology. These are mechanisms typically used by immigrants to name unknown plants. Mestizo names show different degrees of regional variability, though many are shared throughout the region. Vegetation diversity of an area influences the diversity of local plant names. Indigenous Shuar people use only Shuar plant names, which show little variation within the area they inhabit. A comparison of mestizo and Shuar naming practices suggests that mestizo people are more likely to give the same name to different plant species and to use more binomial names than Shuar people do.

**Key words:** common name, edible plant, Ecuador, mestizo, Shuar.

**RESUMEN.**—Se recopilaron 411 nombres vernáculos correspondientes a 354 especies de plantas silvestres comestibles, utilizados por los mestizos y los indígenas Shuar del sur del Ecuador. Los nombres mestizos, la mayoría en español, se originan frecuentemente por transposición, neologismo o son nombres tomados de lenguas indígenas. Los inmigrantes suelen utilizar estos procesos para crear nombres de plantas desconocidas. Los nombres mestizos muestran diferentes grados de variación regional, aunque muchos son compartidos por toda la región. La composición florística de una zona influye sobre la diversidad de nombres comunes de plantas. Los indígenas Shuar utilizan únicamente los nombres de su lengua, que tienen poca variabilidad dentro de la pequeña región que habitan. La comparación de cómo denominan las plantas los mestizos y los pueblos Shuar, sugiere que los mestizos tienden a utilizar el mismo nombre común para especies diferentes y utilizan más nombres binomiales que los Shuar.

**RÉSUMÉ.**—Nous avons pu noter 411 noms vernaculaires pour les 354 plantes comestibles, non cultivées, utilisées par les Métis (peuple non autochtone) et les Shuars (peuple autochtone) du sud de l'Équateur. Les noms métis, surtout tirés de la langue espagnole, sont souvent créés par transposition, par emprunt aux langues indigènes ou par néologisme. Ce sont des procédés typiques des immi-

grants qui cherchent à nommer des plantes inconnues. Quoique les noms métis soient partagés par l'ensemble des Métis de la région, ils n'en montrent pas moins des différences régionales, plus ou moins importantes selon les noms. La diversité des noms de plantes suit celle de la flore locale. Le peuple autochtone Shuar utilise exclusivement des noms de plantes shuars. Ceux-ci montrent également peu de variabilité régionale. En comparant les pratiques des Métis et des Shuars, on remarque que les premiers sont appelés à utiliser le même nom pour des espèces différentes et à recourir davantage aux noms binomiaux.

## INTRODUCTION

Local plant names can provide much information about how plants are viewed within a given culture. They allow people to communicate about and make sense of plants and the relationships that exist between them. A plant's name may be based on its cultural meaning or use, on its morphological characteristics, or on its habitat (Berlin 1992). It carries linguistic information of historical plant exchanges or the movement of people. A name can also indicate the plant's similarity to other plants. Thus, as people name plants, they classify them, knowingly or not.

The correspondence between scientific and folk plant nomenclature is often remarkable, but both systems use their own independent methods for naming and classifying plants. One-to-one relationships between common names and scientific names do not always exist. Sometimes one common name refers to various botanical species (i.e., it is under-differentiated) and sometimes one species is referred to by various common names, showing further subdivision (i.e., it is over-differentiated) (Berlin 1992).

Certain universal structures in the naming of plants can be found throughout all languages and societies (Berlin 1992). Two basic types of common plant names exist: primary and secondary names. Primary names are usually a one-word expression, but can occasionally be complex (binomial). Secondary names are complex (binomial) and occur in sets of contrasting names that indicate hierarchical relations among a group of plant taxa. The contrasting descriptors refer often to a plant's characteristics, distribution or use, and they usually serve to distinguish a plant from related similar plants. Folk genera usually have primary names, whereas subordinate folk specific taxa have secondary names. Sometimes folk species are referred to by primary names. This usually occurs when the plant is culturally important—that is, it is cultivated or managed or has an important use or value within the culture.

At the same time, plant naming is both individual and culture-specific. Not only are regional differences in plant names very common, but also individual people within a limited area or group may not always agree on the names given to a particular plant (Sillitoe 1980). Different common names may be given to one plant or names of related plants may be intermingled.

During an ethnobotanical study of edible non-crop plants in southern Ecuador (provinces of El Oro, Loja and Zamora-Chinchipe) between 1994 and 1997 (Van den Eynden et al. 2003), common plant names were recorded for all edible plants. The term "non-crop plant" indicates plants that are neither crops nor

completely wild. When vegetation is cleared for new fields or pastures, for example, or when fields are weeded, certain useful wild plants are left or tolerated. Many plants are tolerated in hedges or along paths and roads. Farmers also deliberately transfer wild plants to their gardens, to fields, and to hedges. All these practices are classified as plant management (Van den Eynden n.d.).

The linguistic origins, meanings, structures and variations of plant names used by nonindigenous mestizo people and indigenous Shuar people in southern Ecuador will be discussed and compared. Although we only consider edible plants here, we believe this to be a sufficiently representative sample for all the useful plants of the area.

### SETTING

The study area covers about 30,000 km<sup>2</sup> and is divided by the Andes mountains into three major natural regions: coast, Andes highlands and Amazon region. The irregular topography and climate result in a large range of different vegetation types (Van den Eynden et al. 2003) and high species diversity in a relatively small area. More than 6000 plant species are known to grow in southern Ecuador (Jørgensen and León-Yáñez 1999) and ten vegetation types can be identified (Van den Eynden et al. 1999).

The majority of the population of southern Ecuador always lived in the Andean and dry coastal region, with indigenous peoples pushed towards marginal highland and Amazonian areas. Humid coastal and Amazonian regions were only colonized by nonindigenous peoples during the twentieth century, with a rapid increase in the latter half. Agricultural land reforms starting in the 1960s, severe droughts in southern Ecuador (especially in 1968), and major new road construction encouraged the exploitation of previously uncultivated areas. Especially in the coastal wetlands, large banana plantations and shrimp farms have been established in the last 50 years. Agriculture is the most important economic activity in southern Ecuador. In the coastal areas, agriculture is mainly large-scale and export-oriented; the main commodities are bananas, coffee, shrimp, and cattle. In the Andean highlands, small-scale traditional agropastoral farmers mainly practice subsistence agriculture; cash crops such as sugarcane, maize, peanuts, and coffee are also grown. In the Amazonian area, the indigenous Shuar combine traditional agriculture, hunting, fishing, and gathering, whereas colonizers log timber, raise cattle, and farm (Pietri-Levy 1993).

Southern Ecuador has a population of about one million and a low percentage of indigenous people compared to the rest of the country. More than 95% of the population is mestizo. In Latin America, the term mestizo refers to the population descended from Spanish colonizers and indigenous peoples. Quechua-speaking Saraguros (about 22,000 according to Chalán et al. 1994) live in the Saraguro area in Loja province and in the higher parts of Zamora-Chinchipec province. Indigenous Shuar communities (probably totaling about 20,000 people) inhabit the easternmost part of Zamora-Chinchipec province along the Río Zamora, Río Nangaritza, Río Numpatakaima, and their tributaries.

Various cultural and linguistic influences exist in the area due to historical conquests and immigration. The main linguistic influences that can be traced are

Spanish, Quechua, and Shuar. Spanish is the official language of Ecuador today and the dominant language in our study area. The Quechua linguistic influence dates to the Inca reign (A.D. 1463–1531) in the Andean part of southern Ecuador. The Inca displaced many people throughout the empire (Taylor 1991). Present-day Saraguros are thought to have been brought over from the Titicaca area in Bolivia. They maintained their cultural identity and language for more than 500 years. Today they are the only Quechua-speaking community in southern Ecuador.

The Shuar language belongs to the Jívaro linguistic group; it is spoken by Shuar, Achuar, Huambisa, Aguaruna, and Mayna peoples of southeast Ecuador and northern Peru (Harner 1984; Steel 1999). The Shuar people have lived in the eastern part of Zamora-Chinchi province from before the arrival of the Incas, who never managed to conquer them. Until the beginning of the twentieth century, the Shuar were little influenced by any colonizers. Contact with the outside world gradually increased, mainly through trade and the influx of colonizers and missionaries. Their lifestyle has changed dramatically over the last 40 years, as they have come to rely more on agriculture and cattle-raising for cash income. Roads connecting the Andean and Amazonian areas, and national policies encouraging colonization of "virginal" lands, brought in ever more mestizo colonizers (Harner 1984). Other than Shuar, the pre-Inca languages of southern Ecuador (Cañari, Palta, and Malacatos) are poorly known (Harner 1984; Jaramillo 1991; Taylor 1991). The Andean indigenous people who spoke them have disappeared or have blended into the mestizo population (Pietry-Levy 1993).

### METHODOLOGY

The ethnobotanical study was carried out in 42 field sites distributed throughout the different ecological zones (Van den Eynden et al. 2003). A field site usually corresponded to one village, sometimes to two or more. Selected field sites in El Oro province were: Isla Bellavista, Chacras, Arenillas, Piedras, Salati, Casacay, Carabota, Cerro Azul, Zaruma, Sambotambo, Paccha-Daucay, and Chilla; in Loja province: Zapotillo, Puyango, Mangaurco, El Sauce, La Rusia, Sabanilla, Tambo Negro, El Limo, Casanga, Zambi, Catacocha, Amaluza, Celica, Orianga, Sozoranga, Lauro Guerrero, San Lucas, Santiago, Uritusinga, Gualiel, Huachanamá, and Sevilán; and in Zamora-Chinchi province: Timbara, Zumba, Palanda, Tutupali, Sabanilla, Quebrada Honda, El Padmi, and Upper Río Nangaritzza. This last area is inhabited by Shuar people. Here fieldwork was done in the communities of Shayme, San Antonio, Yáyu, Mariposa, and Nuevo Paraíso (mestizo community). El Padmi has a mixed Shuar-mestizo population. All other villages are mestizo communities.

Data were collected through semi-structured interviews with both male and female informants, including one expert informant in each village chosen based on recommendations by villagers. Interviews focused on the knowledge about and use of edible non-crop plants. People were asked to name the edible plants known to them in their area. Further questions were asked about use, harvesting, preparations, management and ecology of the plants. If the botanical identity of a plant was in doubt, interviewees were shown collected specimens of the plant.

Expert informants indicated all edible plants known to them during walks in the area (botanical specimens were collected at that time too). The walks often triggered their recognition of additional edible plants. Plant names were thus gathered during interviews and walks with 46 expert informants (extra Shuar experts were interviewed) and interviews with 123 nonexperts. Interviews were conducted in Spanish without the need for translators. All Shuar informants were bilingual (Shuar-Spanish). Besides interviews, edible plant use information (including plant names) was also collected simply by talking to any person met during field trips.

### MESTIZO PLANT NAMES—OR HOW NONINDIGENOUS PEOPLE NAME PLANTS

All plant names used by the Spanish-speaking mestizo people have been grouped together and labeled "mestizo plant names." A total of 328 mestizo plant names of edible non-crop plants were recorded in southern Ecuador. They correspond to 304 botanical species. Because names were recorded in 41 villages with 149 informants, they represent the collective knowledge of many individuals living in a large area. Regardless of how often the plant names were mentioned, all were included in the list. Spanish dominates mestizo plant nomenclature; 41% of all plant names in the area are entirely or partly Spanish. Other linguistic influences easily identified are Shuar and Quechua. The linguistic origins or meaning of some mestizo plant names remain obscure.

*Plant Naming Mechanisms.*—Historical and recent population movements play an important role in the way plants in southern Ecuador are named. Spanish colonizers arriving in the area 500 years ago had to name plants that were unknown and unfamiliar to them, a process that continues to this day as mestizo farmers colonize new areas in the humid coastal and Amazonian regions.

Generally three mechanisms of naming plants exist among immigrants: transposition, borrowing, and neology (Grenand 1995). Transposition is the naming of new plants using names of plants already known that are similar in use or appearance. Plant names may also be borrowed from indigenous languages. Sometimes they are altered and adapted to fit the newcomers' own language and pronunciation. Neology is the coining of completely new names for plants. These neologisms are often very descriptive, referring to the appearance or use of a plant. All three naming mechanisms can be seen in the mestizo plant names recorded in southern Ecuador.

*Transposition.*—Many names of edible non-crop plants in the study area refer to a known plant (Table 1). This is either because the native plant or its fruit looks similar to the known plant, or because its use is similar. The two plants need not be botanically related. For example, various purple and black berries are called *uva* 'grape' or a derived name like *uva silvestre* 'wild grape', *uvilla* 'small grape', and *uva de montaña* 'mountain grape' or 'wild grape'. Various plants with edible seeds that are roasted and eaten like peanuts are called *maní* 'peanut'. Examples are *maní de árbol* 'tree peanut', *maní de bejuco* 'climbing peanut', and *maní del monte* 'wild peanut'. Almost all plants with edible leaves, regardless of their life form,

TABLE 1.—Mestizo names of edible plants in southern Ecuador formed through transposition.

| Spanish name                                      | Gloss                        | Scientific name  |
|---|------------------------------|--|
| <i>almendro, almendra</i> <sup>1</sup>            | almond                       | <i>Geoffroea spinosa</i> Jacq.; <i>Pentagonia</i> sp.                          |
| <i>berenjena</i>                                  | eggplant                     | <i>Vasconcellea monoica?</i> (Desf.) DC.                                       |
| <i>cacao de monte</i>                             | wild cocoa                   | <i>Pachira aquatica</i> Aubl.  |
| <i>cafecillo</i>                                  | small coffee                 | <i>Tabernaemontana columbiana</i> (Allorge) Leeuwenberg                        |
| <i>caña agria</i>                                 | bitter cane                  | <i>Costus scaber</i> Ruiz & Pavón  |
| <i>cerezo, cereza</i> <sup>1</sup>                | cherry                       | <i>Malpighia emarginata</i> DC.; <i>Muntingia calabura</i> L.                  |
| <i>chocrito</i>                                   | small corn cob               | <i>Lantana</i> sp.   |
| <i>ciruela</i>                                    | plum                         | <i>Bunchosia deflexa</i> Triana & Planchon                                     |
| <i>ciruela de fraile</i>                          | monk's plum                  | <i>Malpighia emarginata</i> DC.  |
| <i>ciruela de monte</i>                           | wild plum                    | <i>Spondias mombin</i> L.  |
| <i>col de monte</i>                               | wild cabbage                 | <i>Anthurium</i> spp.; <i>Vasconcellea microcarpa</i> (Jacq.) DC.              |
| <i>coquillo, coquito</i>                          | small coconut                | <i>Cyperus</i> sp.   |
| <i>granadilla de monte</i>                        | wild granadilla <sup>2</sup> | <i>Claviija pungens</i> (Roem. & Schult.) Decne                                |
| <i>higo</i>                                       | fig                          | <i>Jacaratia spinosa</i> (Aubl) DC.  |
| <i>higuerón</i>                                   | large fig                    | <i>Ficus</i> aff. <i>andicola</i> Standley                                     |
| <i>mani de árbol</i>                              | tree peanut                  | <i>Caryodendron orinocense</i> Karsten   |
| <i>mani de bejuco</i>                             | climbing peanut              | <i>Cayaponia capitata</i> Cogn. ex Harms                                       |
| <i>mani del monte</i>                             | wild peanut                  | <i>Caryodendron orinocense</i> Karsten   |
| <i>manzana</i>                                    | apple                        | <i>Pernettya prostrata</i> (Cav.) Sleumer; <i>Vaccinium floribundum</i> H.B.K. |
| <i>manzana rastrera</i>                           | creeping apple               | <i>Vaccinium crenatum</i> (Don) Sleumer  |
| <i>manzana silvestre</i>                          | wild apple                   | <i>Malpighia emarginata</i> DC.  |
| <i>manzanilla</i>                                 | small apple                  | <i>Vaccinium floribundum</i> H.B.K.  |
| <i>membrillo silvestre</i>                        | wild quince                  | <i>Eugenia stipitata</i> McVaugh ssp. <i>sororia</i> McVaugh                   |
| <i>mora</i>                                       | blackberry                   | <i>Clidemia hirta</i> (L.) Don var. <i>hirta</i> ; <i>Clidemia</i> sp.         |
| <i>naranjilla del campo, naranjilla silvestre</i> | wild naranjilla <sup>3</sup> | <i>Claviija eueganea</i> Macbr.  |
| <i>papayón</i>                                    | large pawpaw                 | <i>Grias peruviana</i> Miers   |
| <i>pepinillo</i>                                  | small pepino <sup>4</sup>    | <i>Cyphomandra cajamuniensis</i> (H.B.K.) Walpers                              |
| <i>pepino de campo</i>                            | wild pepino <sup>4</sup>     | <i>Cyphomandra cajamuniensis</i> (H.B.K.) Walpers                              |
| <i>pepino de monte</i>                            | wild pepino <sup>4</sup>     | <i>Physalis peruviana</i> L.   |

TABLE 1.—Continued.

| Spanish name            | Gloss                     | Scientific name  |
|-------------------------|---------------------------|--|
| romero                  | rosemary                  | <i>Cordia polyantha?</i> Benth.  |
| sacha manzana           | wild apple                | <i>Bellucia pentamera</i> Naud.  |
| uva                     | grape                     | <i>Chondrodendron tomentosum</i> R. & P.; <i>Cordia hebeclada</i> L.M. Johnston; <i>Cordia lutea</i> Lam.; <i>Pourouma bicolor</i> Mart.; <i>Pourouma cecropiifolia</i> Mart.; <i>Pourouma melinonii</i> Benoist |
| uva de montaña          | wild grape                | <i>Pourouma cecropiifolia</i> Mart.  |
| uva pequeña             | small grape               | <i>Clidentia sericea</i> Don   |
| uvilla, ovilla, juvilla | small grape               | <i>Jaltomata</i> sp.; <i>Physalis peruviana</i> L.; <i>Physalis</i> sp.  |
| yuca del campo          | wild cassava              | <i>Vasconcellea parviflora</i> DC.   |
| yuquilla, yuquita       | small cassava             | <i>Oxalis latifolia</i> H.B.K.   |
| zanahoria del campo     | wild carrot               | <i>Oxalis latifolia</i> H.B.K.   |
| zapote de campo         | wild zapote <sup>5</sup>  | <i>Capparis scabrida</i> H.B.K.  |
| zapote de monte         | wild zapote <sup>5</sup>  | <i>Quararibea</i> sp.  |
| zapotillo               | small zapote <sup>5</sup> | <i>Casearia</i> sp.  |

<sup>1</sup> The male form (ending in -o) refers to the tree, the female form (-a) to the fruit.<sup>2</sup> *Granadilla* is the common name of various *Passiflora* species.<sup>3</sup> *Naranjilla* is the common name of *Solanum quitoense*; this name is in itself transposed from *naranja* 'orange'.<sup>4</sup> *Pepino* is the common name of *Solanum muricatum*.<sup>5</sup> *Zapote* is the common name of various species of Sapotaceae.

TABLE 2.—Mestizo names of edible plants in southern Ecuador borrowed from Shuar language.

| Mestizo name<br>(synonym)          | Original Shuar<br>name | Scientific name                                      |
|------------------------------------|------------------------|--|
| <i>acho</i>                        | <i>achu</i>            | <i>Mauritia flexuosa</i> L. f.                       |
| <i>apai</i>                        | <i>apai</i>            | <i>Grias peruviana</i> Miers                         |
| <i>ññaco</i>                       | <i>iniak</i>           | <i>Gustavia macarenensis</i> Philipson               |
| <i>kumbia</i>                      | <i>kumpia</i>          | <i>Renealmia alpinia</i> (Rottb.) Maas               |
| <i>munchi, munchi (granadilla)</i> | <i>(washi) munchi</i>  | <i>Passiflora pergrandis</i> Holm-Nielsen & Lawesson |
| <i>pito</i>                        | <i>pítii</i>           | <i>Trophis racemosa</i> (L.) Urban                   |
| <i>santa maría</i>                 | <i>nátsamar</i>        | <i>Piper</i> sp.                                     |
| <i>shanguinia</i>                  | <i>shankuinia</i>      | <i>Pseudolmedia macrophylla</i> Trécul               |
| <i>shimbe</i>                      | *                      | <i>Euterpe precatoria</i> Mart.                      |
| <i>tinguiwí</i>                    | <i>tinkimi</i>         | <i>Prestoea schultzeana</i> (Burret) H. Moore        |
| <i>urutza</i>                      | <i>uruts</i>           | <i>Protium</i> sp.                                   |
| <i>yaraso, yarasu (caimito)</i>    | <i>yaás, yarasu</i>    | <i>Pouteria caimito</i> (R. & P.) Radlk.             |

\* Shuar people use *shimpí* for *Oenocarpus mapora* H. Karst, a different palm tree.

are called *col de monte* 'wild cabbage'. The only thing they have in common with cabbage is the fact that their leaves are eaten and prepared like cabbage.

Often a descriptor is added to the name, indicating that the plant is a wild form. This can be *silvestre* (wild), *del monte* (from shrubland, wasteland or forest, as opposed to from cropland), *del campo* (from the countryside, as opposed to from an agricultural area) or the Quechua word *sacha* (wild in a broad sense). A diminutive form (*cafecillo*, *uvilla*) or augmentative form (*papayón*) may be used, thus comparing the native plant's size to that of the known plant. Adjectives or descriptors describing the plant's appearance are also sometimes added, for example in *maní de bejuco* 'climbing peanut' and *manzana rastrera* 'creeping apple'. Forty-four recorded mestizo plant names (of 328) are formed through transposition (Table 1). Not all plant names that refer to another plant are formed by transposition, however. When both plants belong to the same genus, names are not considered to be cases of transposition. The name *granadilla de monte* 'wild passionfruit', given to *Claviija pungens*, is an example of transposition. The same name, however, given to *Passiflora punctata* L., is not, as most *Passiflora* species are named *granadilla*. Here *granadilla de monte* just specifies that particular species of passionfruit.

**Borrowing.**—Colonizers in the Amazonian part of southern Ecuador living amongst or near the Shuar people have borrowed certain Shuar plant names and now commonly use them (Table 2). Nuevo Paraíso is a fairly new colonizers' village along the Upper Río Nangaritzá, in the Shuar territory. Of the 29 plant names recorded here, ten are borrowed Shuar names. Five of them are used unchanged (*apai*, *yarasu*, *achu*, *iniak*, *shankuinia*) and another five show linguistic adaptations to Spanish (*pito*, *tinguiwí*, *kumbia*, *urutza*, *santa maría*). Only one plant name has a locally used mestizo synonym: *yarasu* is also called *caimito*. The other nine plant names are unique and no mestizo synonyms are used to refer to these plants. Mestizo colonizers in the area around El Padmi, living amongst Shuar families, use five plant names borrowed from Shuar (of a total of 29 names). Only



TABLE 3.—Mestizo names of edible plants in southern Ecuador borrowed from Quechua.

| Mestizo name                 | Scientific name                              |
|------------------------------|--|
| Quechua borrowed name        |  |
| <i>aguarongo</i>             | <i>Puya</i> sp.                              |
| <i>chawar</i>                | <i>Agave americana</i> L.                    |
| <i>chine (chini)</i>         | Urticaceae gen. indet.                       |
| <i>chulala</i>               | <i>Solanum</i> sp.                           |
| <i>chulalay</i>              | <i>Salpichroa diffusa</i> Miers              |
| <i>chungay</i>               | <i>Vasconcellea candicans</i> (Gary) DC.     |
| <i>huicundo</i>              | Bromeliaceae gen. indet.                     |
| <i>mishiyuyu</i>             | <i>Centropogon cornutus</i> (L.) Druce       |
| <i>mishki</i>                | <i>Agave americana</i> L.                    |
| <i>mote negro*</i>           | <i>Gaultheria erecta</i> Vent.               |
| <i>motepela*</i>             | <i>Centropogon cornutus</i> (L.) Druce       |
| <i>mote pelado*</i>          | <i>Gaultheria reticulata</i> H.B.K.          |
| <i>muyuyo</i>                | <i>Cordia lutea</i> Lam.                     |
| <i>taxo (taksu)</i>          | <i>Passiflora cumbalensis</i> (Karst.) Harms |
| <i>uchnchi</i>               | <i>Solanum brevifolium</i> Dunal             |
| <i>wile</i>                  | <i>Freziera verrucosa</i> (Hieron.) Kobuski  |
| <i>yanamuro (-u)</i>         | <i>Myrcianthes</i> sp.                       |
| Name with Quechua descriptor |  |
| <i>sacha capuli</i>          | <i>Eugenia</i> sp.                           |
| <i>sacha granadilla</i>      | <i>Granadilla foetida</i> L.                 |
| <i>sacha manzana</i>         | <i>Bellucia pentamera</i> Naud.              |
| <i>sacha piña</i>            | <i>Ananas comosus</i> (L.) Merrill           |
| <i>sacha sanguillo</i>       | <i>Anthurium</i> sp.                         |

\* Mote is a type of cooked maize.

one plant has a synonymous mestizo name: *munchi* is also called *granadilla*. In the other six Amazonian villages studied, the population consists entirely of mestizo people. Here fewer plant names borrowed from Shuar language are used: three were recorded in Timbara (*achu*, *iñaco*, *kumbia*) and Palanda (*munche*, *shimbe*, *yaraso*), two in Tutupali (*iñaco*, *yarasu*), and one in Zumba (*yarasu*, also called *caimito* here). The two villages where no plant names borrowed from Shuar were recorded (Quebrada Honda and Sabanilla) are both high up on the Andes slopes (above 1600 m), geographically far from the Shuar territory and with quite different edible species.

A total of twelve different plant names for edible non-crop plants, borrowed from the Shuar language, were thus recorded amongst mestizo colonizers in the Amazonian region of southern Ecuador. They correspond to twelve separate botanical species (Table 2). Only two of the plant names have a synonymous mestizo name. Ten plant names borrowed from Shuar are therefore the only names used by mestizo people to name these particular plant species. No plant names borrowed from Shuar language were recorded outside the Amazonian area (Zamora-Chinchipe province).

Some Quechua linguistic influence in local plant names is found, mainly in the western Andes region of southern Ecuador. A total of 22 recorded mestizo plant names (of 328) are borrowed from Quechua or have a descriptor borrowed from Quechua (Table 3). *Sacha* is regularly used as a descriptor preceding a mes-

tizo plant name to indicate that a plant is wild. Originally a general Quechua term meaning plant, forest, and shrubland, its meaning has changed to "wild."<sup>1</sup> A mapping of the occurrence of borrowed Quechua plant names and the use of *sacha* as a prefix in southern Ecuador shows the highest influence of Quechua in plant names is the area around Saraguro. This is the only area in southern Ecuador where Quechua is still spoken. The Quechua influence in plant names extends towards the Loja area, along the river Catamayo basin and also into the higher parts of the Amazonian region. Names borrowed from Quechua were recorded in 14 field sites (of the 42 studied). In each site, only one to four plant names borrowed from Quechua are used of a total of ten to sixty recorded plant names per site. In Gualiel, four of nineteen plant names are borrowed from Quechua (*mishki*, *yanamuro*, *chulalay*, *uchuchi*). This is the highest occurrence of borrowed Quechua names encountered. Each name borrowed from Quechua is the only name used in that particular community to name a particular plant. No synonymous mestizo names are used in these villages for the same plants.

We can presume that other plant names would have been borrowed in the past from pre-Inca languages like Palta. Since these languages, or any written records about them, do not survive, we cannot say anything more about this possible linguistic influence.

*Neology.*—Twenty-two mestizo plant names that were recorded in this study can be considered as newly invented names (Table 4). The names refer to particular characteristics, uses or origins of the plants. Sometimes the reference is to the edible part of the plant, on other occasions it is to an obvious characteristic. Eleven plant names describe the shape or color of the edible fruit (*cucharilla*, *gañil*, *huevo de gallo*, *huevo de pava*, *huevo de perro*, *lagaña*, *negrito*, *nigua*, *niguito*, *perlilla*, *vainilla*). Two names refer to the fruit consistency (*babosa*, *moco*). One name refers to the color of the flower (*amarillo*). Six names refer to another plant characteristic (*palo blanco*, *pata blanca*, *sierra*, *sierilla*, *uña de gato*, *uña de pava*). The last two names refer to the shape of the plant's thorns. One name refers to the use of the plant (*flor de novia*) and one to the plant's geographical origin (*méjico*). In seven names reference is made to an animal. English translations of the names are given in Table 4.

Most of these new plant names are used very locally and were recorded only once. They may well be idiosyncratic names, although that is difficult to confirm. Many plant species only grow in one particular place, and thus only need to be named there. New names are generally used for edible fruits that are not very significant: the fruits are small and not tasty. Exceptions are *huevo de perro*, *amarillo*, and *palo blanco*. These new names are used throughout southern Ecuador and even beyond. *Huevo de perro* is the name most commonly used for wild plants of *Solanum quitoense*, a plant with large edible fruits that may be sold in markets. The cultivated form of this species is known as *naranjilla*. *Amarillo* and *palo blanco* are important timber trees, their edible fruits are only considered as snack foods. The common use of these new names throughout the area may be attributed to their economic importance.

Almost one-third of all mestizo plant names (102 of 328) are formed through one of these three mechanisms. Our study provides the opportunity to test the assumption that colonizers need to name unknown plants, by analyzing mestizo

TABLE 4.—Mestizo names of edible plants in southern Ecuador, formed through neology.

| Spanish name    | Gloss                           | Scientific name  |
|-----------------|---------------------------------|--|
| amarillo        | yellow                          | <i>Centrolobium ochroxyhan</i> Tul.  |
| babosa          | slimy <sup>1</sup>              | <i>Saurauia bullosa</i> Wawra  |
| cucharilla      | small spoon <sup>2</sup>        | <i>Oreocallis grandiflora</i> (Lam.) R.Br.                                       |
| flor de novia   | bride's flower                  | <i>Yucca</i> sp.   |
| gafúil          | gill <sup>2</sup>               | <i>Oreocallis grandiflora</i> (Lam.) R.Br.                                       |
| huevo del gallo | cock's testicle <sup>2</sup>    | <i>Oreanthes fragilis</i> (A.C.Smith) Luteyn; <i>Gaultheria tomentosa</i> H.B.K. |
| huevo de pava   | turkey's testicle <sup>2</sup>  | <i>Celtis iguanaea</i> (Jacq.) Sarg.   |
| huevo de perro  | dog's testicle <sup>2</sup>     | <i>Solanum quitoense</i> Lam.  |
| lagaña          | dirt <sup>1</sup>               | <i>Cordia polyantha?</i> Benth.  |
| méjico          | Mexico                          | <i>Agave americana</i> L.  |
| moco            | slime <sup>1</sup>              | <i>Saurauia</i> cf. <i>peruviana</i> Buse.                                       |
| negrito         | little black thing <sup>2</sup> | <i>Coccoloba ruiziana</i> Lindau   |
| nigua           | type of fly <sup>2</sup>        | <i>Disterigma alaternoides</i> (Kunth) Niedenzu                                  |
| niguito         | small fly <sup>2</sup>          | <i>Muntingia calabura</i> L.   |
| palo blanco     | white trunk                     | <i>Celtis</i> sp.  |
| pata blanca     | white leg <sup>3</sup>          | Liliaceae gen. indet.  |
| perlilla        | small pear <sup>2</sup>         | <i>Arcytophyllum thymifolium</i> (R. & P.) Standley                              |
| sierra          | saw <sup>4</sup>                | <i>Miconia</i> spp.  |
| sierilla        | little saw <sup>4</sup>         | <i>Gaultheria tomentosa</i> H.B.K.   |
| uña de gato     | cat's nail <sup>5</sup>         | <i>Celtis iguanaea</i> (Jacq.) Sarg.   |
| uña de pava     | turkey's nail <sup>5</sup>      | <i>Celtis iguanaea</i> (Jacq.) Sarg.   |
| uinilla         | small pod <sup>2</sup>          | <i>Caesalpinia spinosa</i> (Molina) O. Kuntze; <i>Vanilla</i> sp.                |

<sup>1</sup> Refers to the consistency of the fruit.<sup>2</sup> Refers to the shape or color of the fruit.<sup>3</sup> Refers to the white stem of the plant.<sup>4</sup> Refers to the serrated leaf margin.<sup>5</sup> Refers to the plant's thorns.

plant names created through transposition, borrowing, and neology in recently colonized areas, compared with those of older communities. In certain recently colonized coastal areas like Isla Bellavista, Cerro Azul and Arenillas, more than one third of all recorded plant names are formed through transposition and neology. There are no borrowed names here because there is no native population. In areas such as Sozoranga, Celica, Amaluza and Catacocha, which have been inhabited since pre-Inca times, fewer than 10% of all plant names are formed through these mechanisms. In the Amazonian region (Zamora-Chinchi), where colonization by mestizo people is fairly recent, and where there is a native population of Shuar people, more than one quarter of all mestizo names of edible plants are formed through transposition and neology or are borrowed from Shuar language. Especially in El Padmi and Nuevo Paraíso, where mestizo people live within the Shuar territory, more than half of the plant names are formed through the three mechanisms.

The percentage of plant names used in a village that are formed through transposition, borrowing, and neology were compared for all mestizo communities (Table 5), distinguishing old and recent colonization (since the 1950s). No significant difference exists between recently colonized areas and areas with old colonization (one-way ANOVA test,  $p = 0.25$ ). If one distinguishes the three categories of colonization separately—old colonization, recent colonization in coastal areas, and recent colonization in Amazonian areas (Table 5)—then a significant difference is found between the newly colonized Amazonian areas and areas with old colonization (one-way ANOVA test,  $p = 0.0015$ ). No significant difference, however, exists between newly colonized coastal areas and areas with old colonization, in terms of mechanisms of plant naming.

*Other Naming Patterns.*—Many binomial mestizo plant names that do not follow any of the three naming mechanisms do have a salient descriptive Spanish (or occasionally Quechua) adjective or descriptor, alongside a seemingly meaningless (opaque) name. The descriptor usually refers to a particular plant characteristic (*cardo rastrero* 'creeping cardo') or indicates that the plant is wild (*papaya del campo* 'wild pawpaw'), which allows similar plants to be distinguished. Many examples can be seen among *Inga* species (generally named *guaba*), where descriptors specify the appearance of the pods of different species (Table 6). The incidence of such binomial plant names is high amongst mestizo names (121 of 328 names). Spanish descriptors always follow the main name, whereas the Quechua descriptor *sacha* precedes the plant name. Some plant names even have two descriptors indicating further specification or subdivision (*salapa blanca grande*).

It is especially common for farming communities to use "wild" as a descriptor to name plants in order to distinguish them from domesticated plants (comment of Ellen in Brown 1985:56). In our records, a total of 41 binomial mestizo plant names (13%) have a form of "wild" as a descriptor.

*Meaning.*—Since many of the edible plants recorded in this study are managed by farmers within the agricultural system as tolerated or cultivated plants, we would like to test Berlin's theory that semantic transparency of plant names is often inversely related to the cultural importance of the plant (Berlin 1992). Plant management indicates a certain level of cultural importance. According to this

TABLE 5.—Relation between percentage of mestizo plant names formed through neology, transposition and borrowing, and the colonization history of a village.

| Village  | Number of<br>plant names | Naming <sup>1</sup> | Colonization<br>history <sup>2</sup> | Colonization<br>history <sup>3</sup> |
|--|--------------------------|---------------------|--------------------------------------|--------------------------------------|
| Old colonization (mean 23.7; st. dev. 12.9)    |                          |                     |                                      |                                      |
| Sozoranga                                      | 16                       | 6                   | 0                                    | 0                                    |
| Celica   | 13                       | 7                   | 0                                    | 0                                    |
| Paccha-Daucay                                  | 10                       | 8                   | 0                                    | 0                                    |
| Amaluza  | 23                       | 8                   | 0                                    | 0                                    |
| Catacocha                                      | 29                       | 11                  | 0                                    | 0                                    |
| Orianga  | 15                       | 13                  | 0                                    | 0                                    |
| Lauro Guerrero                                 | 23                       | 16                  | 0                                    | 0                                    |
| Uritusinga                                     | 12                       | 17                  | 0                                    | 0                                    |
| Zambi  | 32                       | 17                  | 0                                    | 0                                    |
| Chilla   | 16                       | 18                  | 0                                    | 0                                    |
| Huachanamá                                     | 17                       | 20                  | 0                                    | 0                                    |
| Santiago                                       | 19                       | 20                  | 0                                    | 0                                    |
| Casanga  | 48                       | 20                  | 0                                    | 0                                    |
| Gualel   | 17                       | 21                  | 0                                    | 0                                    |
| Salatí   | 19                       | 21                  | 0                                    | 0                                    |
| Tambo Negro                                    | 17                       | 30                  | 0                                    | 0                                    |
| El Sauce                                       | 6                        | 33                  | 0                                    | 0                                    |
| San Lucas                                      | 12                       | 33                  | 0                                    | 0                                    |
| Mangaurco                                      | 7                        | 38                  | 0                                    | 0                                    |
| Sabanilla                                      | 20                       | 38                  | 0                                    | 0                                    |
| La Rusia                                       | 13                       | 40                  | 0                                    | 0                                    |
| Sevillán                                       | 25                       | 41                  | 0                                    | 0                                    |
| Zaruma   | 21                       | 42                  | 0                                    | 0                                    |
| Zapotillo                                      | 9                        | 50                  | 0                                    | 0                                    |
| Recent colonization (mean 29.2; st. dev. 17.9) |                          |                     |                                      |                                      |
| Coastal (mean 18.8; st. dev. 4.4)              |                          |                     |                                      |                                      |
| Sambotambo                                     | 5                        | 0                   | 1                                    | 1                                    |
| El Limo  | 14                       | 0                   | 1                                    | 1                                    |
| Casacay  | 16                       | 4                   | 1                                    | 1                                    |
| Piedras  | 14                       | 14                  | 1                                    | 1                                    |
| Carabota                                       | 10                       | 20                  | 1                                    | 1                                    |
| Chacras  | 11                       | 23                  | 1                                    | 1                                    |
| Puyango  | 15                       | 24                  | 1                                    | 1                                    |
| Arenillas                                      | 9                        | 33                  | 1                                    | 1                                    |
| Cerro Azul                                     | 19                       | 34                  | 1                                    | 1                                    |
| Isla Bellavista                                | 10                       | 36                  | 1                                    | 1                                    |
| Amazonian (mean 42.1; st. dev. 4.9)            |                          |                     |                                      |                                      |
| Palanda  | 27                       | 26                  | 1                                    | 2                                    |
| Zumba  | 13                       | 29                  | 1                                    | 2                                    |
| Timbara  | 22                       | 41                  | 1                                    | 2                                    |
| Tutupali                                       | 22                       | 36                  | 1                                    | 2                                    |
| Nuevo Paraíso <sup>4</sup>                     | 29                       | 65                  | 1                                    | 2                                    |
| Quebrada Honda                                 | 14                       | 36                  | 1                                    | 2                                    |
| El Padmi                                       | 32                       | 60                  | 1                                    | 2                                    |
| Sabanilla Zamora                               | 19                       | 44                  | 1                                    | 2                                    |
| ANOVA-test                                     |                          |                     | p = 0.25                             | p = 0.0015                           |

<sup>1</sup> Percentage of plants names that are formed through transposition, borrowing and neology.<sup>2</sup> 0 = old colonization; 1 = recent colonization (less than 50 years).<sup>3</sup> 0 = old colonization; 1 = recent coastal colonization (<50 years); 2 = recent Amazonian colonization (<50 years).<sup>4</sup> The only mestizo community in the Upper Rio Nangaritza area.

TABLE 6.—Spanish descriptors used to specify different *Inga* species in southern Ecuador.

| Common name               | Descriptor's meaning | Scientific name  |
|---------------------------|----------------------|--|
| <i>guaba cajetilla</i>    | square               | <i>I. sapindoides</i> Willd.   |
| <i>guaba de bejuco</i>    | liana-like           | <i>I. edulis</i> Mart.   |
| <i>guaba de cajón</i>     | square               | <i>I. feullii</i> DC.  |
| <i>guaba de mono</i>      | monkey <sup>1</sup>  | <i>I. striata</i> Benth.   |
| <i>guaba de monte</i>     | wild                 | <i>I. silanchensis</i> T.D. Penn.  |
| <i>guaba de oso</i>       | bear <sup>1</sup>    | <i>I. fendleriana</i> Benth.   |
| <i>guaba de perico</i>    | sloth <sup>1</sup>   | <i>I. oerstediana</i> Benth.   |
| <i>guaba de zorro</i>     | fox <sup>2</sup>     | <i>I. fendleriana</i> Benth.; <i>I. insignis</i> Kunth; <i>I. oerstediana</i> Benth. |
| <i>guaba lanuda</i>       | hairy, woolly        | <i>I. fendleriana</i> Benth.; <i>I. insignis</i> Kunth                               |
| <i>guaba machetona</i>    | machete-shaped       | <i>I. spectabilis</i> (Vahl) Willd.  |
| <i>guaba musga</i>        | hairy, mossy         | <i>I. fendleriana</i> Benth.; <i>I. oerstediana</i> Benth.; <i>I. striata</i> Benth. |
| <i>guaba natural</i>      | natural              | <i>I. striata</i> Benth.   |
| <i>guaba negra</i>        | black hairy          | <i>I. nobilis</i> Willd. ssp. <i>quaternata</i> (P. & E.) T.D. Penn.                 |
| <i>guaba poroto</i>       | bean-like            | <i>I. silanchensis</i> T.D. Penn.  |
| <i>guaba rabo de mono</i> | monkey-tail          | <i>I. oerstediana</i> Benth.   |
| <i>guaba vainilla</i>     | small bean-like      | <i>I. laurina</i> (Sw.) Willd.   |
| <i>guaba verde</i>        | green <sup>3</sup>   | <i>I. striata</i> Benth.   |

<sup>1</sup> Refers to brown hairs on pod.<sup>2</sup> Refers to red hairs on pod.<sup>3</sup> Refers to the smooth, hairless pod.

theory, managed species would have more opaque (nondescriptive) names and nonmanaged plants would have more semantically transparent or descriptive names. Berlin argues that this is because everyone knows a culturally important plant, even when the common name gives no clues about its appearance, characteristics or use. On the other hand, culturally less important plants need a more descriptive name for people to be able to remember the plant.

In our study, Spanish plant names, such as *mani de árbol* 'tree peanut', are the most transparent and non-Spanish plant names, such as *vichayo*, are the most opaque. Plant names with some degree of Spanish influence are between the two extremes and considered as semitransparent (for example, names with a Spanish descriptor, like *guaba de mono* 'monkey guaba'). Organizing all plant species according to their degree of management (distinguishing the categories wild, tolerated, and cultivated) and the transparency of their common names (distinguishing the categories transparent, semitransparent, and opaque), and testing for independence of the variables, we can show statistically that there is no relation between the semantic transparency of a mestizo plant name and the cultural status of the plant (Table 7).

**Nomenclature Structures.**—Mestizo plant names can be classified as primary and secondary. Primary names are either simple expressions (e.g., *shora*) or complex, binomial expressions (e.g., *guanábana silvestre*). Secondary names are complex and occur in sets of contrasting names (e.g., *granadilla amarilla* and *granadilla negra*). However, these contrasting sets are often used in only a single community. They

TABLE 7.—Relation between management of edible plants and semantic transparency of their names.

| Plant management | Opaque plant names | Semitransparent plant names | Transparent plant names |
|------------------|--------------------|-----------------------------|-------------------------|
| Wild             | 78                 | 37                          | 49                      |
| Tolerated        | 46                 | 20                          | 20                      |
| Cultivated       | 21                 | 19                          | 14                      |

$\chi^2 = 5.17$ ; d.f. = 4;  $p = 0.05$ ;  $H_0$  accepted.

depend on which plant resources grow locally. Since the mestizo plant names were collected in a large geographical area and represent the plant knowledge of many individuals in many communities, it is not possible to clearly distinguish primary complex names from secondary names.

Most mestizo plant names have a one-to-one correspondence with a botanical species. Forty-seven names, however, are under-differentiated and correspond with 2 to 14 botanical species. *Guaba* is used for 14 different species of *Inga* and *mora* is used for 13 different botanical species belonging to several genera. There are, however, strong regional differences that depend strongly on the number of different species that grow in any one area. In some communities various *Inga* species have their own binomial names, whereas in other areas the primary name *guaba* is used for all *Inga* species. Also, some informants are more inclined to lump different taxa under one name, whereas others use distinct names.

Some common names are over-differentiated and refer to varietal subdivisions within a botanical species. Two different varieties of *Macleania rupestris* (H.B.K.) A.C.Smith are recognized in Sevillán: *joyapa blanca* and *joyapa chaucha*. In the area of Zambí, *M. salapa* (Benth.) Hook f. ex Hoerold is subdivided into *joyapa blanca* and *joyapa morada*. Two varieties of *Myrcia fallax* (Rich.) DC., *saca blanca* and *saca colorada*, are distinguished in Sozoranga. In Santiago, *Rubus floribundus* Kunth is divided into *mora pequeña*, *mora grande*, and *mora grande de jugo*. *Vasconcellea*  $\times$  *heilbornii* (Badillo) Badillo is an important economic species with an enormous range of fruit types and shapes, developed over centuries of management and cultivation. Often these crosses are all called *toronche*, but in some areas local varieties like *chamburo*, *siglo*, and *babaco* are recognized.

### VARIATIONS IN MESTIZO PLANT NAMES

The area where mestizo plant names were collected is so large and diverse that it is important to analyze regional variations in names. Because the vegetation in different areas is often distinctive, the botanical species of edible plants may be very different. It is therefore not always straightforward to compare plant naming variations between communities.

Ninety-nine edible plant species were, however, recorded in at least two communities. Two-thirds of these (65 plants) have only one common name throughout southern Ecuador; for some plants the same unique name was recorded in up to 10 different communities (Table 8). Sometimes slight variations of the same name are used. These can be phonological (spoken) or lexical (written) variations, or binomial names derived from one and the same primary name. *Pouteria lucuma*

TABLE 8.—Unique mestizo names of edible plants used throughout southern Ecuador and the number of communities where the name was recorded (minimum 5 of a total of 42 communities).

| Common name | Number of communities | Scientific name   |
|-------------|-----------------------|---|
| algarrobo   | 5                     | <i>Prosopis juliflora</i> (Sw.) DC.                         |
| caimito     | 5                     | <i>Pouteria caimito</i> (R.&P.) Radlk.                      |
| chirimoya   | 9                     | <i>Annona cherimola</i> Mill.                               |
| chivilla    | 5                     | <i>Attalea colenda</i> (O.F.Cook) Balslev & Andr. Hend.     |
| chonta      | 5                     | <i>Bactris gasipaes</i> H.B.K.                              |
| chonta      | 7                     | <i>Bactris macana</i> (Mart.) Pittier                       |
| guanábana   | 10                    | <i>Annona muricata</i> L.                                   |
| guásimo     | 6                     | <i>Guazuma ulmifolia</i> Lam.                               |
| guayabilla  | 5                     | <i>Psidium guineense</i> Sw.                                |
| lusumbe     | 7                     | <i>Pradosia montana</i> T.D.Penn.                           |
| mortino     | 8                     | <i>Solanum americanum</i> Mill.                             |
| pechiche    | 5                     | <i>Vitex gigantea</i> H.B.K.                                |
| pitaya      | 11                    | <i>Hylocereus polyrhizus</i> (Weber) Britton & Rose         |
| quique      | 7                     | <i>Hesperomeles ferruginea</i> (Pers.) Benth.               |
| sota        | 5                     | <i>Machura tinctoria</i> (L.) Steudel ssp. <i>tinctoria</i> |
| verdolago   | 9                     | <i>Portulaca oleracea</i> L.                                |

(R.& P.) Kuntze is usually called *luma* (the fruit) or *lumo* (the tree), but can also be called *lucumo*. *Cyperus* sp. is called *coquillo* or *coquito*, both meaning "small coconut," describing the edible roots. *Hylocereus polyrhizus* (Weber) Britton & Rose is generally called *pitaya*, but some people say *piyahaya*. *Clawija evergreena* is called *naranjilla del campo* or *naranjilla silvestre*, according to the area; both names indicate the "wildness" of the plant. *Lycopersicon pimpinellifolium* (Jusl.) Mill. can be called *tomatillo*, *tomate del campo*, *tomatillo de gallinazo* or *tomate wislico*, according to the area. Various species of *Inga* are called *guaba*, or may have a binomial name derived from *guaba* (Table 6).

A second group of ten plants are known with one common name throughout southern Ecuador, but one or two different names are used in particular areas or by some informants. *Acnistus arborescens* (L.) Schlecht. is generally called *pico pico* (in 14 communities of 42), only in two places is it called *sabaluco*. *Erythrina edulis* Triana ex M. Micheli is called *guato* in the western part of southern Ecuador, but *pashul* or *cañari* in some areas in the east. *Prestoea acuminata* Willd. is generally known as *palmito*, in some areas distinct names like *tinguiso* and *caño* are used. Only in Amaluza is *Allophylus mollis* (Kunth) Radlk. known as *clambo*, in all other areas it is called *shiringo*. *Inga marginata* Willd. is always called *guabilla*, except in Zambi, where it is called *porotillo*. *Cordia lutea* is called *uxa* or *overal* and *Passiflora foetida* L. is (*sacha*) *granadilla* throughout southern Ecuador, except on Isla Bella-vista where these are known as *muyuyo* and *bedoca* respectively. *Physalis peruviana* is named *uvilla*, *ovilla*, or *juvilla*, but known in Cerro Azul as *pepino de monte*. *Inga spectabilis* is generally called *guaba machetona*, but in some areas *panaco*. Likewise, *Inga oerstediana* generally has a binomial name derived from *guaba* (Table 6), but is sometimes called *laricaro*.

A third group are plants that are known throughout southern Ecuador by completely different names. Only 24 plants that were recorded in at least two



TABLE 9.—Relation between management of edible plants and variation of their names.

| Plant management | Unique name | Name variants* | Various regional names |
|------------------|-------------|----------------|------------------------|
| Wild             | 133         | 6              | 23                     |
| Tolerated        | 65          | 6              | 15                     |
| Cultivated       | 29          | 10             | 14                     |

$\chi^2 = 20.0$ ; d.f. = 4;  $p < 0.001$ ;  $H_0$  rejected.

\* Lexical or phonological name variants, or various binomial names derived from the same primary name.

villages belong to this group. *Celtis iguanaea* is called *cacumba*, *uña de gato*, *uña de pava*, *huevo de pava*, *mogroño*, *uva* or *uva de pava* in different communities. *Agave americana* can be called *méjico* (after its region of origin), *mishki* (the Quechua name of its juice), *penco* (the name of its leaves) or *chawar*. *Coccoloba ruiziana* is known as *añalque*, *añalque pampero*, *añalque chiquito*, *indindo*, or *negrito*.

Why do certain plants have a single name throughout southern Ecuador, whilst others have various names? Often, culturally important plants have fewer name variants than less important ones (Berlin 1992). We can test this proposition for all name variants, in southern Ecuador: phonological and lexical variants, binomial name variants and regional variants. Plant management is one way to measure cultural importance. Organizing all recorded plant species according to their degree of management (distinguishing the categories wild, tolerated, and cultivated plants) and the presence or absence of name variation (distinguishing plants with unique names, name variants, and various names), we can test for independence between both factors using a  $\chi^2$ -test. There is a significant link between the cultural importance of a plant and the variation in its name in southern Ecuador (Table 9). It is, however, opposite to the relation found by Berlin (1992): wild plants in southern Ecuador have fewer name variants than managed plants.

Most wild plants, however, were recorded only in one field site, with one name. This may give a false picture of name variation structures, as such local names would necessarily count as unique. We therefore limited the test to the 99 species of edible plants that were recorded in at least two different field sites. Although tolerated and cultivated plants seem to have more unique names than wild plants, a  $\chi^2$ -test shows that there is no significant link between the management of a plant and its name variations (Table 10a).

A disproportionate number of trees and plants with economically valued fruits have a unique or at least generally recognized common name. Marketed fruits can be considered as culturally more important than fruits that are gathered occasionally as snack foods. Trees often have multiple uses (timber, fuel) and may be more visible in the landscape, giving them more cultural importance than herbs and shrubs. The test for independence between name variation and whether or not a plant is marketed found no significant relation between the two criteria (Table 10b). Similarly, the test for independence between name variation and the life form of a plant (tree, shrub, herb) found no significant relation (Table 10c).

Finally, we noticed that unique plant names in southern Ecuador are more likely to be opaque and plants whose names vary throughout the study area are more likely to have transparent names that describe salient characteristics. A  $\chi^2$ -

TABLE 10.—Relation between name variation of edible plants (mentioned in at least two villages) and various factors expressing their cultural importance.

|   | Unique name | Name variants | Various regional names |
|---|-------------|---------------|------------------------|
| a. Plant management                                     |             |               |                        |
| Wild  | 15          | 1             | 10                     |
| Tolerated   | 33          | 4             | 8                      |
| Cultivated  | 17          | 5             | 6                      |
| $\chi^2 = 6.5$ ; d.f. = 4; $p < 0.2$ ; $H_0$ accepted   |             |               |                        |
| b. Fruit  |             |               |                        |
| Economic fruit  | 14          | 2             | 4                      |
| Non-economic fruit                                      | 51          | 8             | 20                     |
| $\chi^2 = 0.26$ ; d.f. = 2; $p < 0.2$ ; $H_0$ accepted  |             |               |                        |
| c. Life form  |             |               |                        |
| Tree  | 40          | 6             | 8                      |
| Shrub   | 12          | 2             | 10                     |
| Herb  | 13          | 2             | 6                      |
| $\chi^2 = 6.8$ ; d.f. = 4; $p < 1$ ; $H_0$ accepted     |             |               |                        |
| d. Name   |             |               |                        |
| Transparent name  | 10          | 1.7*          | 11.3*                  |
| Opaque name   | 55          | 8.3*          | 12.7*                  |
| $\chi^2 = 10.1$ ; d.f. = 2; $p < 0.01$ ; $H_0$ rejected |             |               |                        |

\* Decimal values because all common names for each species are given a total value of 1 per plant species.

test of this hypothesis found a significant relationship (Table 10d). Opaque plant names are therefore less likely to vary throughout southern Ecuador.

An important factor in the naming of plants within any one community is the number of similar plants occurring in the area. For example, if only one type of palm tree is found in a village, it is likely to be simply called *palma*; if only one species of *Inga* is found in an area it will most likely be called *guaba*. If more species of the same genus or family occur in the area, distinctive names are usually given to each one. All *Rubus* species in southern Ecuador are called *mora*. Only in Santiago, where five *Rubus* species occur together, are they given distinct secondary names like *mora grande*, *mora pequeña*, *mora grande de jugo* (three different types of *R. floribundus* Kunth), *mora de pepa* (*R. bogotensis* H.B.K.), *mora de los pajones* (*R. loxensis* Benth.), *mora de piña grande* (*R. nubigenus* Kunth), and *mora piña* (*R. roseus* Poir.). The names given may have a very restricted use because they are needed only to distinguish locally available species. *Inga striata* for example is called *guaba verde* in most places because its pods are typically hairless and green whereas most other *Inga* species have brownish hairy pods. In Sabanilla and Palanda, however, it is called *guabilla*, because it is the *Inga* with the smallest pods (compared to *I. extra-nodis* T.D.Penn. and *I. densiflora* Benth.).

#### SHUAR PLANT NAMES

Shuar people use exclusively Shuar names for the plants they know and use, although they often know the equivalent mestizo or Spanish names. A total of 83

TABLE 11.—Primary and derived secondary Shuar names of edible non-crop plants.

| Primary Shuar names with corresponding scientific names   | Secondary Shuar names with corresponding scientific names   |
|---|---|
| <i>chimi</i> — <i>Pseudolmedia laevigata</i> Trécul   | <i>kawachimi</i> — <i>Cordia nodosa</i> Lam.  |
| <i>écp</i> — <i>Anthurium</i> generic   | <i>katshiniak écp</i> — <i>Anthurium breviscopum</i> Kunth  |
| but; <i>shiniumas</i> — <i>A. rubrinervium</i> (Link) Don,  | <i>natsa écp</i> — <i>Anthurium</i> sp.   |
| <i>wankat</i> — <i>A. triphyllum</i> Brogn. ex Schott   | <i>wec écp</i> — <i>A. sect. Xialophyllum</i>   |
| <i>iniák</i> — <i>Gustavia macarenensis</i> Philipson   | <i>tsantsaniak</i> — <i>Gustavia</i> sp.  |
| <i>kukúch'</i> — <i>Solanum</i> generic   | <i>shuankukúch'</i> — <i>Solanum</i> sp.  |
|   | <i>ya kukúch'</i> — <i>S. stramonifolium?</i> Lam.  |
| <i>munchi</i> — <i>Passiflora</i> generic; <i>P. pergrandis</i> Holm-Nielsen & Lawesson   | <i>patúkmai munchi</i> — <i>Passiflora foetida</i> L.   |
|   | <i>tsere munchi</i> — <i>Passiflora</i> sp.   |
|   | <i>washi munchi</i> — <i>P. pergrandis</i> Holm-Nielsen & Lawesson  |
| <i>sámpi</i> — <i>Inga</i> generic; <i>I. acreana</i> Harms   | <i>inik sámpi</i> — <i>Inga microcoma?</i> Harms, <i>I. nobilis</i> Willd. ssp. <i>quaternata</i> (P. & E.) T.D. Penn., <i>I. punctata</i> Willd. |
| but: <i>napúrak</i> — <i>I. thibaudiana</i> DC., <i>wámpa</i> — <i>I. edulis</i> Mart., <i>wampukish</i> — <i>I. nobilis</i> Willd. ssp. <i>nobilis</i> | <i>kunkuín sámpi</i> — <i>I. nobilis</i> ssp. <i>quaternata</i>   |
|   | <i>main sámpi</i> — <i>I. leucalycina</i> Benth.  |
|   | <i>yakum sámpi</i> — <i>I. capitata</i> Desv.   |
| <i>shuinia</i> — <i>Pourouma</i> generic  | <i>mutuch' shuinia</i> — <i>Pourouma bicolor</i> Mart., <i>P. guianensis</i> Aublet, <i>P. melinonii</i> Benoist                                  |
|   | <i>nakantar shuinia</i> — <i>P. bicolor</i> Mart.   |
|   | <i>pau shuinia</i> — <i>P. aff. cecropiifolia</i> Mart.   |
|   | <i>washi shuinia</i> — <i>P. cecropiifolia</i> Mart., <i>P. guianensis</i> Aublet   |

Shuar names of edible non-crop plants was recorded from 20 informants in the Shuar communities along the Upper Río Nangaritza and in El Padmi (Appendix 1). They correspond to 72 botanical species. We are not familiar enough with the Shuar language to be able to analyze the meaning and origin of these names.

*Nomenclature Structures.*—The Shuar plant names were collected in a relatively small area with uniform vegetation. The structure of the names can therefore be studied in detail. Of the 83 recorded names listed in Appendix 1, 65 (78%) are simple primary names and 16 (19%) are secondary (binomial) names; we have been unable to analyze the structure of two names. Table 11 shows examples of groups of primary names (folk genera) and sets of contrasting secondary names (folk species) derived from each primary name. Shuar descriptors are always placed before the primary names. These primary names correspond to folk generic taxa, with further division into folk specific taxa by their secondary names. A folk genus can correspond to a botanical one, but does not necessarily include all the species that grow in the study area (Berlin 1992). In the case of *sámpi*, for example, five *Inga* species have a secondary name derived from the primary name *sámpi*, but three other *Inga* species have different primary names (*wámpa*, *napúrak*, *wampukish*). The name *sámpi* is also used to name one particular species, *Inga acreana* Harms. Similarly, *munchi* indicates both passionfruit in general and one particular species, *Passiflora pergrandis*, which is the most common and largest

edible passionfruit in the area. The fact that a primary name is used for one particular botanical species may indicate the cultural importance of that species. All 12 different edible palm species used by the Shuar have their own primary name, which probably reflects their cultural importance. This is in stark contrast to the generalized naming of palms by mestizo people (Table 12).

The relationship between common name and botanical name is in most cases one-to-one. Exceptions include: *shiniumas*, *najaraip*, *chimi*, and *kushikiam*, which are each used for two different species of the same botanical genus; these names are therefore under-differentiated (Berlin 1992). Some secondary names in the *shuinia* and *sámpi* group are used for different botanical species by some informants. *Mutuch' shuinia* is the common name for *Pourouma bicolor*, *P. guianensis*, and *P. melinonii*, but some informants use *nakantar shuinia* for *P. bicolor* and *washi shuinia* for *P. guianensis* and also for *P. cecropiifolia*. *Imik sámpi* is the local name for three *Inga* species, *I. microcoma*, *I. nobilis* and *I. punctata*. But *I. nobilis* is by some informants called *kunkuín sámpi*. This may either indicate that the different plant species are not considered as separate taxa, or that there exists variability in plant naming between informants.

*Regional Variation of Shuar Names.*—Few naming variations exist amongst informants and between communities in the study area, even though El Padmi and the Upper Río Nangaritza are more than 100 km apart. Only four cases of lexical variation were recorded: *tinkimi-tinkibi*; *kúnakip-kúnapi*; *nátsamar-nátsatsam*; *yáas-yarasu*. Some informants are inclined to use more detailed secondary names, whereas others use the general corresponding primary names (*kathsiniap éep-éep*; *washí munchi-munchi*). For only two botanical species were two completely different Shuar names recorded from different informants: *wankat* and *éep* for *Anthurium triphyllum*; *imik sámpi*, *kunkuín sámpi* and *wampukish* for *Inga nobilis* ssp. *quaternata*.

In order to analyze possible regional variations of Shuar plant names even further, we compared the names we recorded with Shuar plant names elicited during two ethnobotanical studies carried out in neighboring Morona-Santiago province, approximately 250 km northeast of the Upper Nangaritza area (Bennett et al. 2002; Borgtoft et al. 1998). Thirty-four botanical species were recorded in all three studies. Seven plant names were the same in all three studies (*achu*, *apai*, *kumpia*, *kunchai*, *kunkuk'*, *uwi*, and *yaas*). Most of these are economically important fruits. Another fifteen names were the same in our study and in one of the other two studies. For two of them a different name was recorded in the third study, for the remaining thirteen no name had been recorded. Five names had a different descriptor, but the same generic name and five names showed lexical variations. For only two botanical species were the names recorded in the three studies completely unrelated. Shuar plant names used by different Shuar communities show therefore little variation.

#### COMPARING MESTIZO AND SHUAR PLANT NOMENCLATURE

It is difficult to directly compare mestizo and Shuar nomenclature. Mestizo plant names were recorded in a large area with a high diversity of vegetation

TABLE 12.—Comparing Shuar and mestizo names given to palm trees.

| Scientific name  | Shuar name       | Mestizo name                                |
|--|------------------|---|
| <i>Alphanes grandis</i> Borchs. & Balslev                                | —                | chonta                                      |
| <i>Alphanes verrucosa</i> Borchs. & Balslev                              | —                | chonta                                      |
| <i>Astrocaryum urostachys</i> Burret                                     | awant'           | —   |
| <i>Attalea colenda</i> (O.F. Cook) Balslev & Andr. Hend.                 | —                | chivila                                     |
| <i>Bactris gasipaes</i> H.B.K.   | uwof             | chonta                                      |
| <i>Bactris macana</i> (Mart.) Pittier                                    | —                | chonta                                      |
| <i>Bactris setulosa</i> H. Karst.  | —                | chontilla, chonta                           |
| <i>Ceroxylon amazonicum</i> ? Galeano                                    | paik'            | palma de ramas                              |
| <i>Ceroxylon echinulatum</i> Galeano                                     | —                | palma                                       |
| <i>Ceroxylon vogelianum</i> (Engel) H. Wendl.                            | —                | coco  |
| <i>Ceroxylon</i> sp.   | —                | palma                                       |
| <i>Dictyocaryum lamarekianum</i> (Mart.) H. Wendl.                       | —                | palma                                       |
| <i>Euterpe precatoria</i> Mart.  | —                | shimbe, palma                               |
| <i>Euterpe precatoria</i> var. <i>longetraginata</i> (Mart) Andre. Hend. | —                | palmo real <sup>1</sup>                     |
| <i>Euterpe</i> ?   | yayu             | —   |
| <i>Iriartea deltoidea</i> R. & P.  | ampakaf          | pambil, palmito                             |
| <i>Iriartea</i> sp.  | —                | palma, palmita                              |
| <i>Mauritia flexuosa</i> L.f.  | achu             | acho  |
| <i>Oenocarpus bataua</i> Mart.   | kunkuk'          | palma real                                  |
| <i>Oenocarpus mapora</i> H. Karst.                                       | shimpi           | —   |
| <i>Pholidostachys synanthera</i> (Mart.) H. Moore                        | —                | palma paja cambana                          |
| <i>Phytelephas aequatorialis</i> Spruce                                  | —                | tagua, trupa, tapra, cade                   |
| <i>Prestoea acuminata</i> Willd.   | saké             | palma, palmito, <sup>1</sup> caño, tinguiso |
| <i>Prestoea ensiformis</i> (R. & P.) H. Moore                            | —                | caño  |
| <i>Prestoea schultzeana</i> (Burret) H. Moore                            | tinkibi, tinkimi | —   |
| <i>Socratea exorrhiza</i> (Mart.) H. Wendl.                              | kúpat            | —   |
| <i>Wettinia kaltreyeri</i> (Burret) R. Bernal                            | —                | bambil, pambil                              |
| <i>Wettinia maynensis</i> Burret   | terén            | —   |
| <i>Wettinia</i> cf. <i>maynensis</i> Burret                              | —                | palma                                       |

<sup>1</sup> The male variant *palmo* or *palmito* refers to the tree being tall, stout or single-stemmed.

types, plant species, and communities. Various ethnic and linguistic factors have influenced the creation and evolution of mestizo plant names. Shuar plant names, on the other hand, were recorded in a relatively small area with a uniform vegetation and population. There are, however, some interesting points of comparison.

Mestizo people tend to use a high percentage of binomial plant names. Thirty-six percent of mestizo plant names are binomial, compared to 25% of Shuar plant names. Mestizo plant names are more likely to be under-differentiated (14% compared to 5% for Shuar names).

Different patterns emerge in mestizo and Shuar naming when comparing how two culturally important groups of plants (palm trees and *Inga* species) are named. Mestizo people often simply call a palm tree a palm (*palma*), whereas Shuar people give each palm tree a distinctive and unique name, which probably indicates the cultural importance of palm trees for Shuar people (Table 12). Shuar people use 12 species of palm trees with edible parts that belong to 10 botanical genera; they refer to each of them with a different primary name. Mestizo people use 23 different species of palm trees, belonging to 13 genera, for which 18 common names exist. Thirteen of them are primary names (72%) and 5 are binomials (28%). The five palm species with spiny trunks are called *chonta* or the derived name *chontilla*; 11 species are called *palma* or a derived binomial name such as *palma de rmas*, *palma real*, *palmita*, or *palma paja cambana*.

There is some ambiguity in this analysis because mestizo names are recorded over a large area; for any one mestizo community, there are usually only one or two palm species, each of which typically has its own name. Mestizo plant names given to palm trees are indeed very generalized, but then there is probably no need to give separate names if the variety of palm species in the area is low.

Another interesting group of plants is the genus *Inga*, represented by 33 species in southern Ecuador. These multipurpose trees are often used as shade trees in traditional coffee groves. They provide good fuelwood and the fruits have an edible aril. Shuar people use eight species (and two subspecies), for which they have four primary and four secondary names (Table 11). Mestizo people use 23 *Inga* species. Twenty-three binomial mestizo names were recorded, 22 of which are derived from *guaba* (examples in Table 6) and one from *laricaro*. (The primary names *laricaro* and *panaco* are sometimes used as synonyms alongside *guaba*.) This again illustrates the more generalized way of naming plants by mestizo people. Even though various *Inga* species often grow in an area, informants are likely to refer to all of them as *guaba*; some use descriptors to create unique binomial names that distinguish each species.

## CONCLUSIONS AND DISCUSSION

The basic data of this study come from an ethnobotanical inventory of edible non-crop plants of southern Ecuador. We do, however, believe that the large number of plant names (411 names for 354 species) that was recorded throughout southern Ecuador, combined with information on where they were recorded and how often, provide a unique opportunity to analyze how indigenous and non-

indigenous people in the area name plants. We also believe these findings to be representative for the naming of useful plants in general.

'Climbing peanuts' (*maní de bejuco*) and 'dog's testicles' (*huevo de perro*) are typical examples of how certain mestizo plant names in southern Ecuador are formed. 'Climbing peanuts' is the name of a vine, *Cayaponia capitata*, whose seeds resemble peanuts. This is a good example of transposition as a way of naming plants. 'Dog's testicles' is the name given to the hairy, oval, orange fruits of *Solanum quitoense*. This name, formed through neology, refers to the shape, size and appearance of the fruits. Transposition, neology and borrowing from indigenous languages (Shuar and Quechua) are mechanisms through which almost one-third of all mestizo plant names in southern Ecuador are formed. Another third are binomial names, one part of which is a Spanish adjective or descriptor. Descriptors are used to differentiate between similar plants or to describe a plant in more detail. They often refer to the plant being wild or highlight some other characteristic.

These observed mechanisms are typical for the naming of plants by immigrants. In the case of southern Ecuador, the immigrants creating new names were the Spanish colonizers, but also more recently Spanish-speaking mestizo colonizers migrating to new coastal and Amazonian areas. Unknown plants have to be named and this can be done by reference to known plants, by making up new names or by borrowing indigenous plant names. In recently colonized Amazonian villages, significantly more plant names are formed through these mechanisms than in villages that have been inhabited for a long time. This is, however, not the case for recently colonized coastal areas.

Forty-one percent of all mestizo names are (at least partly) Spanish. The indigenous languages Shuar and Quechua, although still spoken today by ethnic minorities in southern Ecuador, have not had an important influence on the naming of plants by mestizo people, though they may have a local influence in the area where they are spoken. Names borrowed from Shuar are rarely used by mestizo people, even when they live in the Shuar territory, which suggests that cultural exchanges between Shuar and non-Shuar people are limited.

Besides the names whose meaning or origin can be analyzed, by recognizing the mechanism that created the name, many mestizo plant names can not be analyzed in any way. For many binomial names the meaning of the Spanish or Quechua descriptor can be understood, but the rest of the name has no apparent meaning. Some names may go back to local pre-Inca languages. Many plant names are, however, simply names whose origins cannot be traced.

Such nondescriptive, opaque names show the least variation and are used to refer to the same plant taxa throughout southern Ecuador. Transparent, descriptive names, on the other hand, created through transposition or neology, or binomial names with Spanish descriptors, are most likely to vary from one area to another. Two-thirds of all edible plant species that grow throughout southern Ecuador and were recorded in at least two distinct field sites, have the same unique name in the whole region. For some plants local names exist in addition to a generally known name. A small number of plants are known by a series of different common names throughout the region. Most recorded plants, however, grow in a narrow geographical area and are known there by one name. Their

name variation can therefore not be analyzed. Economic or cultural importance of a plant has no apparent influence on the uniqueness or variability of mestizo names throughout southern Ecuador.

The naming of plants in a locality is influenced by the species composition of the area. The presence of many related plant taxa may lead to more explicit plant naming, but that is not always the case. In some areas detailed names are used to distinguish between related plants, whereas in other areas similar plants are given the same name. Knowledge and use of plant names also varies among people living in the same area. In the study area, growth of many of the edible non-crop plants is managed, which suggests they have some cultural importance. There is, however, no significant relation between the management status of a plant and the transparency or linguistic variation of its name. This is a typical phenomenon in the naming of plants in various languages throughout the world (Berlin 1992). The fact that this does not apply to our recorded plant names is probably due to the ethnically mixed situation in southern Ecuador.

Shuar plant names show little variation among villages or informants. Shuar people usually use one distinctive primary or secondary name for each botanical species. Mestizo people tend to use more binomial plant names than Shuar people do, and the names are more underdifferentiated (i.e., the same name is given to various botanical taxa). This is the case for two groups of culturally important plants, palms and *Inga* species. Mestizo names vary more from one area to another. The apparently greater variability in mestizo plant names compared to Shuar ones may simply reflect our interview sample, which included more mestizo people living in a larger and more biologically diverse area.

Could the differences in plant naming partly be explained by the different lifestyles of mestizo and Shuar people? According to Brown (1985), farming people use significantly more secondary plant names (binomials) than hunter-gatherers do, probably because of their more extensive plant knowledge. Possible explanations for this are the fact that agriculture creates a diversity of ecosystems which contain more plants, and the fact that farmers, who usually live at higher population densities, need to know more wild plants in case their crops fail. Could this in part explain a difference in use of binomial names between Shuar and mestizo people? Mestizo people are primarily farmers, whereas Shuar people incorporate more hunting and gathering practices in their farming subsistence.

Another potential explanation is suggested by Lewis et al. (1988), who report a high occurrence of primary plant names used by Jívaro people in Peru and attribute this to an "economy of words" in an oral culture. Using primary names (one word only) means communication can be more rapid. This, however, seems implausible. Why would mestizo people not want to economize on words?

The plant names included in this article were recorded in various communities spread over a large and highly varied geographical area. They therefore represent the collective knowledge of many individuals, living in many different communities and often using different plant species. It would be a mistake to make too many generalizations, since it is difficult to distinguish idiosyncratically assigned descriptive names from names shared by the population of southern Ecuador. More detailed studies would be necessary to fully understand the logic behind the naming of plants in southern Ecuador by indigenous and nonindige-



nous people. A complete list of all 411 plant names has not been added here, due to its length, but can be obtained from the authors.

#### NOTES

<sup>1</sup> Jacobs, P. n.d. *Runasimi Vocabulary* [online] Available at: <http://www.philip-jacobs.de/runasimi/runasimi.txt> (verified February 24, 2004).

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## APPENDIX 1.—Shuar plant names of edible non-crop plants recorded in southern Ecuador.

| Shuar name              | Scientific name   |
|-------------------------|---|
| <i>achu</i>             | <i>Mauritia flexuosa</i> L.f.   |
| <i>ampakai</i>          | <i>Iriartea deltoidea</i> Ruiz & Pavón  |
| <i>apai</i>             | <i>Grias peruviana</i> Miers  |
| <i>awant'</i>           | <i>Astrocaryum urostachys</i> Burret  |
| <i>chimi</i>            | <i>Pseudolmedia laevigata</i> Trécul; <i>Pseudolmedia</i> sp.   |
| <i>chúrunch'</i>        | <i>Arthrostemma ciliatum</i> Ruiz & Pavón   |
| <i>eép</i>              | <i>Anthurium brevicaule</i> Kunth; <i>Anthurium triphyllum</i> Brogn. ex Schott;<br><i>Anthurium</i> sp.  |
| <i>inik sámpe</i>       | <i>Inga microcoma</i> ? Harms.; <i>Inga nobilis</i> Willd. ssp. <i>quaternata</i> (P. & E.)<br>T.D. Penn.; <i>Inga punctata</i> Willd.              |
| <i>iniák</i>            | <i>Gustavia macarenensis</i> Philipson ssp. <i>macarenensis</i>   |
| <i>jímia</i>            | <i>Solanum</i> sp.  |
| <i>katirpas</i>         | <i>Rhodospatia latifolia</i> Poeppig  |
| <i>katshiniak eép</i>   | <i>Anthurium brevicaule</i> Kunth   |
| <i>kawachimí</i>        | <i>Cordia nodosa</i> Lam.   |
| <i>kukúch'</i>          | <i>Solanum</i> sp.  |
| <i>kumpía</i>           | <i>Renalmia alpinia</i> (Rottb.) Maas   |
| <i>kúnakip</i>          | <i>Tabernaemontana sananho</i> Ruiz & Pavón   |
| <i>kúnapi</i>           | <i>Tabernaemontana sananho</i> Ruiz & Pavón   |
| <i>kunchái</i>          | <i>Dacryodes peruviana</i> (Loes.) J.F. Macbr.  |
| <i>kunkuín sámpe</i>    | <i>Inga nobilis</i> Willd. ssp. <i>quaternata</i>   |
| <i>kunkuk'</i>          | <i>Oenocarpus balaia</i> Mart.  |
| <i>kúpat</i>            | <i>Socratea exorrhiza</i> (Mart.) H. Wendl.   |
| <i>kushikiam</i>        | <i>Herrania mariae</i> var. <i>putumayonis</i> R.E. Schultes; <i>Herrania</i> sp.   |
| <i>main sámpe</i>       | <i>Inga leiocalycina</i> Benth.   |
| <i>mirikú</i>           | Moraceae gen. indet.  |
| <i>moras</i>            | <i>Rubus urticifolius</i> Poir.   |
| <i>mukumanch'</i>       | <i>Rhodospatia moritziana</i> Schott  |
| <i>munchi</i>           | <i>Passiflora pergrandis</i> Holm-Nielsen & Lawesson; <i>Passiflora</i> cf. <i>pergrandis</i>   |
| <i>mutuch' shuinia</i>  | <i>Pourouma bicolor</i> Mart; <i>Pourouma guianensis</i> Aublet ssp. <i>guianensis</i> ;<br><i>Pourouma melinonii</i> Benoist ssp. <i>melinonii</i> |
| <i>naámpe</i>           | <i>Caryodendron orinocense</i> Karsten  |
| <i>najaratp</i>         | <i>Casaria</i> spp.   |
| <i>nakantar shuinia</i> | <i>Pourouma bicolor</i> Mart.   |
| <i>napúrak</i>          | <i>Inga thibaudiana</i> DC. ssp. <i>thibaudiana</i>   |
| <i>nara</i>             | Urticaceae gen. indet.  |
| <i>nátsapai</i>         | <i>Grias</i> cf. <i>peruviana</i> Miers   |
| <i>natsa eép</i>        | <i>Anthurium</i> sp.  |
| <i>natsa unkuch'</i>    | <i>Piper</i> sp.  |
| <i>nátsamar</i>         | <i>Piper</i> sp.  |
| <i>nátsatsam</i>        | <i>Piper</i> sp.  |
| <i>mumbi</i>            | <i>Jacaratia digitata</i> (Poepp. & Endl.) Solms  |
| <i>paik'</i>            | <i>Ceroxylon amazonicum</i> ? Galeano   |
| <i>patúkmai munchi</i>  | <i>Passiflora foetida</i> L.  |
| <i>pau shuinia</i>      | <i>Pourouma</i> aff. <i>cecropiifolia</i> Mart.   |
| <i>pítuu</i>            | <i>Trophis racemosa</i> (L.) Urban; <i>Trophis</i> sp.  |
| <i>pumpuná</i>          | <i>Carludovica palmata</i> Ruiz & Pavón   |
| <i>saké</i>             | <i>Prestoea acuminata</i> Willd.  |
| <i>sámpe</i>            | <i>Inga acreana</i> Harms   |
| <i>shankuinia</i>       | <i>Pseudolmedia macrophylla</i> Trécul  |
| <i>sharimiat</i>        | <i>Mouriri grandiflora</i> A. DC.   |

## APPENDIX 1.—Continued

| Shuar name           | Scientific name  |
|----------------------|--|
| <i>shúmpi</i>        | <i>Oenocarpus mapora</i> H. Karst.   |
| <i>shúmpiship</i>    | <i>Solanum americanum</i> Mill.  |
| <i>shiniumas</i>     | <i>Anthurium rubrinervium</i> (Link) G. Don; <i>Anthurium</i> sp.                                  |
| <i>shuankukúch'</i>  | <i>Solanum</i> sp.   |
| <i>supíntim</i>      | <i>Coussarea brevicaulis</i> Krause  |
| <i>terén</i>         | <i>Wettinia maynensis</i> Burret   |
| <i>tinkibi</i>       | <i>Prestoea schultzeana</i> (Burret) H. Moore  |
| <i>tinkimi</i>       | <i>Prestoea schultzeana</i> (Burret) H. Moore  |
| <i>tsachik</i>       | <i>Celtis iguanaea</i> (Jacq.) Sarg.   |
| <i>tsamba</i>        | <i>Vasconcellea microcarpa</i> (Jacq.) A. DC.  |
| <i>tsambánumi</i>    | <i>Vasconcellea microcarpa</i> (Jacq.) A. DC.  |
| <i>tsantsaniak</i>   | <i>Gustavia</i> sp.  |
| <i>tsere munchi</i>  | <i>Passiflora</i> sp.  |
| <i>tserempach'</i>   | <i>Inga marginata</i> Willd.   |
| <i>tunchinchi</i>    | <i>Piper</i> sp.   |
| <i>túnkia</i>        | <i>Bellucia pentamera</i> Naud.  |
| <i>unkuch'</i>       | <i>Piper</i> sp.   |
| <i>untuntup'</i>     | <i>Piper</i> sp.   |
| <i>uruts</i>         | <i>Protium</i> sp.   |
| <i>utói</i>          | <i>Bactris gasipaes</i> H.B.K.   |
| <i>wakam</i>         | <i>Theobroma bicolor</i> L.  |
| <i>wámpa</i>         | <i>Inga edulis</i> Mart.   |
| <i>wampukish</i>     | <i>Inga nobilis</i> Willd. ssp. <i>nobilis</i> ; <i>Inga nobilis</i> Willd. ssp. <i>quaternata</i> |
| <i>wámkat</i>        | <i>Anthurium triphyllum</i> Brogn. ex Schott   |
| <i>washi munchi</i>  | <i>Passiflora pergrandis</i> Holm-Nielsen & Lawesson   |
| <i>washi shuinia</i> | <i>Pourouma cecropiifolia</i> Mart.; <i>Pourouma guianensis</i> Aublet ssp. <i>guianensis</i>      |
| <i>wayákish</i>      | Lauraceae gen. indet.  |
| <i>wee eép</i>       | <i>Anthurium</i> sect. <i>Xinlophyllum</i>   |
| <i>wuak</i>          | <i>Cayaponia capitata</i> Cogn. ex Harms   |
| <i>ya kukúch'</i>    | <i>Solanum stramonifolium?</i> Lam.  |
| <i>yaás</i>          | <i>Pouteria caimito</i> (R. & P.) Radlk.   |
| <i>yakum sámpi</i>   | <i>Inga capitata</i> Desvaux   |
| <i>yarasu</i>        | <i>Pouteria caimito</i> (R. & P.) Radlk.   |
| <i>yayu</i>          | <i>Euterpe?</i>  |
| <i>yurámmis</i>      | <i>Physalis peruviana</i> L.   |