

THE USE OF OFFICINAL PLANTS AMONG THE
LAMA PEOPLE OF YOL-MO

Preliminary report based on materials gathered and
prepared with the Biologist Luca De Bettini in the
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"Medicine is the only profession which has qualified members, and in Tibet they are many and excellent. It is not their custom to ask the patient how he is or what is his pain, but they feel first one pulse, then the other, then both together, and then say what ails the sick man. They have not many drugs, but good medicinal herbs, either indigenous or brought from China, the Lhoba country, (....), Nepal or Hindustan, From: Ippolito Desideri, *Historical Sketch of Thibet* (1712-1733), ed. by Filippo de Filippi as *An Account of Tibet*, London, 1937, p. 186.

Traditional medicine still occupies an important place both in Tibet proper and in cultural Tibet, where not only the profession of *am-chi* (or *em-chi*: physician)¹ is passed down from father to son in Ladakh, and a dispensary has been opened in Dharamsala, but also the healing power is still worshipped in the form of a set of eight "Medicine Buddhas", the supreme doctors who taught men how to cure sin, the most powerful disharmony causing physical infirmity. The chief of those "Medicine Buddhas", Vaidūrya Prabharāja, is portrayed in Tibetan iconography holding an iron bowl in his lap, and a twig of myrobolan plant (see: *Terminalia*, in the list below), a very tangible and material symbol of physical, and not just spiritual healing.

¹For the etymology of this word, see B. Laufer, *Loan-Words in Tibetan*, Leiden, E.J. Brill, 1918 (off print), p. 89, No. 162: "According to Jaschke, a Turkish word. From Uigur *umci* (....), Mongol *amei*".

Even the Chinese, particularly after their conquest of Tibet proper in 1959, have recognized Tibetan medicine as "a very great basis and component of the medicinal knowledge" of China,² though "contemporary Chinese claims making Tibetan medicine derive from the medicine of the Han, are deprived of all foundation".³ The earliest and most serious historical reference to Tibetan medicine is possibly the chapter in the *Chronicle of Tun-huang*, giving an account of the history of medicine in Tibet. R. Stein explains that, according to the *Chronicle*, the Indian physician Vajradhaja, the Chinese physician Hen-weng hang-de, and a physician from Khrom ("Rome", a Tibetan term designating the Romanized west in general)⁴ called Ga-le-nos, from Tazig (Iran), were invited to Tibet during the reign of Srong-btsan-sgam-po (609-649 A.D). Works representing the different medical schools of those countries were then translated into Tibetan, but only the "Galen from Iran", Ga-le-nos, was appointed royal physician and he taught a class of pupils regardless of their family rank. Later on, in the VIIIth cent., another physician from Khrom, Bi-chi-tsan-ba-shi-la-ha, whose name in fact contains the Persian word meaning "physician", was invited to the Tibetan court. Again, it was that "Greek from Iran", rather than a Chinese or an Indian, who was appointed royal physician and "lord of the king", and entitled to sit in the centre of the assembly on "an excellent rug" and to be venerated as "superior" by all the others.⁵

Tibetan secular literature is primarily concerned with medicine, on which countless treatises were written, the most widely known being the *Vaidurya sNgon-po*, by Sangs-rgyas rGya-mtsho (1653-1705). Another outstanding work on the subject is the *Shel-gong* and its autocommentary, the *Shel-phreng*, by Til-dmar dge-bshes bsTan-'dzin-phun-tshogs (XVIIIth

²From: *mDo-dBus mTho-sgang sMan-ris gSal-ba'i Me-long*, Hsi-ning, Publishing House of the People of Tsinghai, 1973, Vol. I, p. 27.

³From F. Meyer, "Médecine tibétaine - l'homme et son milieu" in *Himalaya: Ecologie-Ethnologie*, Paris, C.N.R.S., 1977, p. 196. Cf. *China Reconstructs*, XXV/3, pp. 40-1.

⁴As the identification of Khrom with the Romanized west in general is accepted not only by R. Stein, but also by D. Snellgrove, H. Richardson, and other eminent tibetologists, it is somewhat surprising to find it described as "a province in Eastern Tibet" in a recent work on Tibetan medicine (J.K. Rechung, *Tibetan Medicine*, London, Wellcome Institute of the History of Medicine, 1973, p. 16).

⁵R. Stein, *La civilisation tibétaine*, Paris, Dunod, 1962, pp. 39-40.

cent.). On the latter sources in particular, the Mongolian 'Jam-dpal-rdo-rje based, probably in the early XIXth cent., his profusely illustrated *Tibeto-Mongolian Materia Medica of Ayurveda*, which was edited by L. Chandra in 1971, with a foreward by E. Gene Smith. Such circumstances point to the facts that Tibetan medicine derived its theory and application not only from Ayurvedic medicine and that its techniques of diagnosis and treatment were not solely borrowed from Indian or Chinese medicine, but that it drew from other sources, too, and that in doing so, it developed a number of peculiarities of its own.⁶ Consequently, I shall not insist any further on the necessity of considering Tibetan medicine as a separate historical entity, also in view of the fact that F. Meyer has brilliantly demonstrated that point in his very competent article "Médicine tibétaine - l'homme et son milieu".

The purpose of this preliminary report, rather, is to ascertain how and to which extent the Tibetan medical tradition survives in one culturally Tibetan area of the Nepalese Himālaya: Helambu (or Helmu, Tib.: Yol-mo). The report is based on field-work carried out in October-November 1975 with the view of surveying the use of officinal plants among the local population.

Historical reference to Himalayan medicinal plants can be found in both Tibetan and European literature on the subject, as is illustrated by the introductory quotation from Father Ippolito Desideri's account of his mission and travels in Tibet in the early XVIIIth cent. A whole episode of the national saga of Tibet, *Ge-sar* of *Gling* (or *Ge-sar* of *Khrom*) is devoted to the hero's "expedition to the country of the heretics of the Himālaya, holders of medicinal plants".⁷ During his mission to Nepal in 1793, Colonel W. Kirkpatrick noticed: "The medicinal plants, as well as the dying drugs which rank among the natural growth of this country, are likewise very numerous, and some of them very valuable; of the former the Teetea-pât, Juttha, or Jaitamâsi, the Kootka, the Bikmah, the Cheraita, and the Roopmenger

⁶F. Meyer, op. cit., p. 195.

⁷R. Stein, *Recherches sur l'épopée et le barde au Tibet*, Paris, imprimerie Nationale, 1959, p.57. Cf. A David-Neel and Lama Yongden, *The Superhuman Life of Gesar of Gling*, London, Rider & Co., 1933, pp.109-110 for the various names of plants (*a-ru-ra*, *skyu-ru-ra*, *dza-ti*, etc.) which are the object of Ge-sar's quest. The names of such medicinal plants are to be encountered in the list below.

(all of them bitter or aromatic woods) are in the most estimation".⁸ The names of some of those medicinal plants will be encountered again, with different spellings, in the list below. The export of officinal plants from Nepal had been encouraged by Prithvi Narayan Shah (1725-1775) who directed that "herbs and drugs and other indigenous products" should "be sent to foreign countries and money thus attracted".⁹

During our visit to Yol-mo, the biologist Luca De Bettini and I interviewed a few farmers and medicine lamas, and gathered a number of dry and fresh samples of officinal plants, which were subsequently identified at the Department of Medicinal Plants of Kathmandu by Mr. Puspa Sakya, thanks to whose co-operation we had been able to obtain a special visa for Yol-mo and the equipment necessary for the collection of our herbarium. Our approach to the research was ethnobotanical and, to a lesser degree, lexicographic, rather than merely botanical. From October 22 to November 15 we marched almost every day to various hamlets or monasteries, visiting and revisiting our informants, slowly winning over their reluctance to give us information and our discouragement at the frequent requests of western medicines by the local population, and eventually obtaining a great deal of specimens, too. Our initial difficulties were probably owed to the circumstance that our research may well have appeared retrospective, if not useless, to people who were often anxious to progress towards western medicine.

The main town of the area we studied is rTa-brgya Gyang (Tarke Gyang), a relatively affluent village, at an altitude of 9,300 feet. Other places where we stayed for the purpose of our research include: Sermathang and its neighbouring hamlet of Taperka; Kolama, a hamlet neighbouring Chimi Gyang; Melemchi; the little monastery of Cham Gyang, near Tarke Gyang; and the monastery of Bakhang, founded in 1934,

⁸W. Kirkpatrick, *An Account of the Kingdom of Nepal*, New Delhi, Asian Publication Services, 1975 repr., p.182. On p.207 the author mentions "Jaithamâsi, and various other medicinal drugs" as being produced in Tibet proper and in the border area of Kho-char (For this spelling see: G. Tucci, *Preliminary Report on Two Scientific Expeditions to Nepal*, Roma, Is. M.E.O., 1956, p.62). W. Kirkpatrick's spelling of local names is not always consistent. For these plants, cf, also F. Buchanan Hamilton, *An Account of the Kingdom of Nepal*, Edinburgh, Constable & Co., 1819, pp.85-6 and 97-100.

⁹M.C. Regmi, *A Study in Nepali Economic History*, New Delhi, Manjusri Publishing House, 1971, p. 147.

the largest and wealthiest monastery in Yol-mo. Further research was carried out at the Tibetan centre of Bodhnāth, in the Kathmandu Valley. The people who inhabit Yol-mo have been studied by Graham Clarke, who is preparing a comprehensive work on the subject: they are ethnically, linguistically and culturally, Tibetans.¹⁰

Despite its obvious limitations, the preliminary conclusions we were able to draw from our research appear to be interesting also in view of the future development it may have. The first conclusion is that the science of medicinal plants in Yol-mo is not popular knowledge. The local population seems to rely entirely upon the prestige of traditional Tibetan medical knowledge as well as to trust the quicker and more apparent successes of western synthetic medicines. Furthermore, local folk are somewhat reluctant to admit that any popular use of medicinal plants actually exists, probably because of a kind of inferiority complex they have developed or perhaps inherited with regard to western scientific standards. Such a feeling seems to be shared by the better educated strata of the population, as we gathered from a conversation with a Lama nurse from Taperka on the subject of a plant which is very common in Yol-mo and whose fresh leaves are pounded to be used against bruises.

The second consideration to be made is that traditional medical science and the appreciable use of medicinal plants in Yol-mo appear by and large to be the prerogative of Tibetan monks who have received their regular religious education in monasteries, where they are subsequently trained as apothecaries and physicians. Such a circumstance confirms the strong influence of the Tibetan cultural heritage in the Himalayan areas of Nepal and the ascendancy which the Buddhist clergy still enjoys there nowadays.

¹⁰I follow Mr. Graham Clarke (Lincoln College, Oxford) in preferring the appellation "Lama people" to the common one of "Sherpa". Only a few people from Yol-mo have connections with the actual Sherpas: they are in fact mostly Tibetans from Kyi-rong and Tamangs. In this context the word "lama" does not necessarily have religious implications, but rather indicates clan connotations. Mr. Clarke tells us that lamas from Kyi-rong (Southern Tibet) were given land grants in the upper ridges of Yol-mo by the Malla Kings in 1723, for services rendered in Yol-mo. Lama villages like Tarke Gyang were founded as retreats and subsequently underwent economic expansion. The result has been the formation of an elitist society in which competition and religious prestige play a fundamental role. The fact that people from the Lama clan call themselves "Shar-pa" in conversation with foreigners must be regarded as an attempt to simplify their otherwise obscure and complicated origin: all

By and large, both considerations reflect the situation of medical science in Tibet, where western medicine was held in great esteem until 1959: the British hospital in Lhasa was always busy, and such a circumstance is not surprising if we consider that in 1900, for instance, an epidemic of smallpox killed more than six thousand people only in Lhasa, and that not even the Dalai Lama was spared from the disease.¹¹ H. Richardson has pointed out that "Monks and lamas, as well as layfolk, made use of its services, and patients travelled from long distances seeking treatment. British, Sikkimese and Indian doctors were welcomed on the most friendly terms in the houses of the nobles and in the apartments of high-ranking lamas. Western medicine, especially 'injections', became a matter of prestige...".¹² Furthermore, Tibetan apothecaries were "glad to receive new drugs from any source, and the chief source in recent centuries has been China. From the Chinese and from those who cut up corpses (*ra-rgyab-pa*) they have gained some knowledge of the actual internal physical structure and the functioning of the human body, but no one ever seems to have shown interest in resolving the contradictions with ancient Indian psycho-physical theories, derived primarily from the practice of *yoga*."¹³ Indian medical notions were preserved in Tibet chiefly as a literary and academic tradition, as was the case for other subjects belonging to the Indian scholastic inheritance. The Sanskrit names of Indian medicinal plants were kept for reasons of prestige and sometimes used to indicate local medicinal plants altogether different from the original Indian ones. That is why literary identification of plants alone is useless in the context of any seriously scientific study of Tibetan medicine. Tibetan medical practice deserves the attention of serious study, and one must deal with it on an empirical basis, identifying and testing the medicaments actually in use and watching the cures. In connection with Tibetan medical studies, the so-called "medical

foreigners visiting Nepal have an idea of what Sherpas are; however, the Lama people of Yol-mo do not perform those activities of portorage which Sherpas are so highly reputed for. Likewise, a citizen of the Republic of San Marino would probably speak of himself as "Italian" if he were to be asked his nationality by a Tibetan.

¹¹Cf. Dr. R. Moise, "Nota sulla medicina e l'igiene nel Tibet", in Tucci, *A Lhasa e oltre*, Roma, La Libreria dello Stato, 1952, p.143.

¹²D.L. Snellgrove and H. Richardson, *A Cultural History of Tibet*, London, Weidenfeld and Nicolson, 1968, pp. 261-262.

¹³*Ibidem*.

college" of lCag-po-ri, in Lhasa, was rather a temple than a centre whence medically qualified graduates would go out to practice their skills among the sick.¹⁴ Like their colleagues in Yol-mo, its inmates would spend their time praying and invoking the intervention of the gods to re-establish the balance of the three humours which permeate the whole body but govern, above all, the brain, the abdomen and the bowels respectively.¹⁵ Similarly, they would devote some of their time to growing and collecting plants of which they would have real knowledge, manufacturing pills and preparing medicaments "and a few of them would make use of the experience gained, in order to make a little extra money by the way...".¹⁶ Tibetan doctors had a sort of Garden of Aesculapius "on a mountain to the north of Lhasa, near the monastery of Sera", where "Most of the herbs used as medicine were gathered".¹⁷ Pills "were appropriately blessed before being distributed to those in need of them, with instructions not only on the dose to be taken, but on the times of the day they were to be swallowed and the prayers that were to be said with them"¹⁸ and "for most illnesses Tibetans put more faith in prayers, charms and amulets than in medicine".¹⁹ Like in Yol-mo, villagers could take advantage of the experience of some apothecary lama who would give some pills or prepare a concoction from his available stock of ingredients, and, what is most important, give a blessing as well. It was not a mere coincidence that we found one of our informants concerned with the prayers and rituals of the after-death ceremony at the bedside of one of his colleagues.

Unless otherwise stated, the use of the plants in the following

¹⁴Ibidem.

¹⁵Cf. G. Tucci, *A Lhasa e oltre*, op. cit., p. 79 and *Tibet* London, Paul Elek Ltd., 1967, pp. 163-4. When one of the humours prevails over the others, illness results. The theory of the humours is of Indian derivation and provides the basis of Tibetan medicine. It is founded on the belief that physical imbalance is associated with spiritual imbalance.

¹⁶D. Snellgrove and H. Richardson, op. cit., ibidem.

¹⁷G. Tucci, *Tibet*, op. cit., p. 164

¹⁸Ibidem.

¹⁹D. Snellgrove and H. Richardson, op. cit., ibidem.

list refers to information gathered from Tibetan monks living locally, rather than from local farmers:

Fungi

1. Hypocreaceae

Cordyceps sinensis (Berk.) Sacc. (Tib.: *dbyar-rtswa dgun-'bu*, "Summer-plant winter-worm"). This parasitic fungus is distributed in Himalayan areas of Nepal such as the upper Langtang, north of Yol-mo, where it is gathered at 4, 200 m. It comes out of the anterior end of a Lepidoptera's larva during the monsoon period. The larva "is seen living if the plant is collected in early monsoon. In the month of July when the yak herds are shifted to the higher altitude, the yaks hurriedly search for these plants among the grasses and hence one can not find the plant in the areas where yaks and sheep grazes". (*sic*). "To detect the fructification of the plant which comes out of the ground among the grasses one has to bent (*sic*) down to keep one's eye to the grass level and see around. One may see the plant as a small spike of *Ophioglossum* with dark brown fructification and yellowish white stalk 5-8 cm. long". "Plant combination with *Orehis incarnata*, honey and cow's milk; tonic to yak and sheep".²⁰

Angiospermae Dicotyledones

2. Ranunculaceae

Delphinium sp. (Nep.: *niribiashi*; Tib.: *bong-dkar*; Eng.: larkspur).

According to our informant in Melemchi, the root of this plant

²⁰ From *Medicinal Plants of Nepal*, Kathmandu, Ministry of Forests, 1970, pp.116-7. Cf. also: S. Ch. Das, *A Tibetan-English Dictionary*, Delhi, Motilal Banarsidass, 1976 repr., p.914; F. Hulbotter, *Chinesisch-Tibetische Pharmakologie und Rezeptur*, Ulm-Donau, Karl F. Haug Verlag, 1957, p.48; L. Chandra (ed.), *A Tibeto-Mongolian Materia Medica of Ayurveda of 'Jam-dpal-rdo-rje of Mongolia*, New Delhi, International Academy of Indian Culture, 1971, f.168; *mDo-dBus mTho-sgang sMan-rin gSal-ba'i Me-long*, op. cit., pp.294-5. B. Laufer (op. cit., pp.41 and 45-6) gives the following further sources: A. Engler, *Die natuerlichen Pflanzenfamilien*, Vol.1, 1, pp.368-9; A. Hosie, "Journey to the Eastern Frontier of Tibet", *Parliamentary Papers, China*, No.1, 1905, p.38; Parenin, *Lettres edificantes*, Paris, 1781, Vol.XIX, pp.300-3; W. Rockhill, *J.R.A.S.*, 1981, p.271; G.A. Stuart, *Chinese Materia Medica*, p.126; and *List of Chinese Medicines*, Shanghai, 1889, p.442, (No. 287).

is used as an antidote against aconite poisoning. However, no specific antidote for aconite poisoning is available in modern western medicine. The Sanskrit *nirvisa* stands for "not poisonous; deprived of poison". As a matter of fact delphinine, the active principle of larkspur, is an irritant poison, causing vomiting and purging. Perhaps it is in its connection with being violently emetic and cathartic, that this species is used. The alkaloid delphinine "has also been employed similarly to aconite, both internally and externally, for neuralgia... By depressing the action of the spinal cord it arrests the convulsions caused by strychnine".²¹ The Tibetan word has been variously translated as "the white species of aconite" (S. Ch. Das, op. cit., p. 878), "*Aconitum heterophyllum* Wall".²² (Atis root, another species of *Ranunculaea*, growing in the Western temperate Himalayas, not containing aconitine and said to be non-poisonous), and "*Aconitum sinense*" (F. Hubotter, op. cit., p. 26). Cf. also L. Chandra (ed.), op. cit., f. 159. Both *Delphinium* and *Aconitum* belong to the same family and, as it happens, it is likely that the Tibetan name designates various different species in different areas of cultural Tibet. The officinal use of this plant by decoction is confirmed in *mDo-dBus* etc., op. cit., pp. 30-31: "Regarding drugs of mineral substances, they are cooked in the juice of *bong-dkar*: one ounce of *Delphinium* (sp.) is added to one catty (16 ounces) of mineral substance. Then their poison is driven away". The certain use of "*Nirbishi*" is echoed by F. Hamilton, op. cit., pp. 98-9.

3. Papaveraceae

- (a) *Meconopsis* sp. (Tib.: *ut-pal*. F. Meyer has pointed out that, although the Sanskrit *ut-pa-la* designates the blue lotus, the Tibetan name designates different varieties of *Mecconopsis* growing at high altitude).²³ The dry fruit of this plant is ground and diluted in lukewarm water, to serve

²¹M. Grieve, *A Modern Herbal*, Harmondsworth, Penguin Books, 1978, p. 771.

²²V. Dash, *Tibetan Medicine With Special Reference to Yoga Sataka*, Dharamsala, Library of Tibetan Works & Archives, 1976, p. 316.

²³F. Meyer, op. cit., p. 201.

as a diuretic. Cf. L. Chandra (ed.), op. cit., f. 173, and *mDo-dBus* etc., op. cit., pp. 570-2.

- (b) *Meconopsis* sp. (Tib.: *mdzer-gan*). The flower of this other species is prepared and used in the same way as the preceding one.

4. Rutaceae

Zanthoxylum armatum D.C. (*zanthoxylum alatum* Roxb.) (Nep.: *timur*; Tib.: *g.yer-ma*). The fruits of this shrub, or small tree, distributed in the Himalayan and Mahabharat regions of Nepal between 1,500 and 2,400 m, are pounded and either chewed on their own or else eaten with other food for their stomachic properties. Cf. L. Chandra (ed.), op. cit., f. 99, F. Hübötter, op. cit., pp. 104.5, *mDo-dBus* etc., op. cit., pp. 392.4, and *Medicinal Plants of Nepal*, op. cit., p. 60. According to B. Laufer, op. cit., p. 89, the Tibetan *g.yer-ma* derives "In all probability, from Uigur *yarma*...".

5. Rosaceae

Potentilla (fulgens Wall.?) (Yol-mo dialect: *grod-lod*). The root of this herb, distributed between 2,400 and 2,700 m, is used as an astringent in cases of diarrhoea.

6. Saxifragaceae

Bergenia ligulata (Wall.) Engl. (Tib.: *ha-bo*; Eng.: rockfoil). This perennial herb is distributed in the Mahabharat area between 2,100 and 3,000 m. Its root is ground into a powder which is diluted into water to serve as an antitoxic. Cf. *Medicinal Plants of Nepal*, op. cit., p. 83.

7. Combretaceae

- (a) *Terminalia belerica* Roxb. (Nep.: *barro*; Tib.: *ba-ru-ra* and *a-ru-ra*; Eng.: bastard myrobalan). The pericarp in the fruit of this large tree, diffused in the Himalayan region of Nepal, appears to be used as an antispasmodic or, mixed with water and made into a paste, to disinfect wounds. Cf. L. Chandra, (ed.) op. cit., f. 84 and *Medicinal Plants of Nepal*, op. cit., pp. 93-4.

- (b) *Terminalia chebula* (Nep.: harro; Tib.: a-ru-ra). This large deciduous tree reaching the height of 30 m grows in the Himalayan regions of Nepal up to 1,500 m. The external part of its fruit, ground and mixed with water, is believed to serve as an expectorant, whereas in the form of a pill it would be used as an analgesic. Cf. F. Hubotter, op. cit., p. 101; V.B. Deash, op. cit., p. 347 and "The Drug *Terminalia Chebula* in Ayurveda and Tibetan Medical Literature", *Kailash*, IV/I, pp. 5-20; L. Chandra (ed.) op. cit., f. 81; and *Medicinal Plants of Nepal*, op. cit., p. 150. The unripe, astringent fruits of this myrobalan are a source of tannin and "are also used in dyeing, possibly for their tannin content when mordanting wool for other dyestuffs, certainly as the source of a yellowish brown dye in themselves".²⁴

8. Compositae

Aster sp. (Nep.: bheDako ankha; Tib.: lug-mig, "sheep eye": "*Aster alpinus* L.", "*Aster altaicus* Willd.", "*Aster biennis* Ldb.").²⁵ It is distributed in Yol-mo. Its flower is believed to cure "poison and plague".²⁶ The medicinal use of the flower of this plant is confirmed in L. Chandra (ed.), op. cit., f. 174.

9. Gentianaceae

(a) *Gentiana* sp. (Tib.: spang-rgyan; "*Gentiana kurroo*",²⁷ "*Gentiana decumbens* L.", "*Gentiana triflora* Pall.").²⁸ Its blue flower is pounded and prepared as a decoction to serve as a digestive and an antispasmodic. Cf. L. Chandra (ed.), op. cit., f.177 and S. Ch. Das, op. cit., p. 797.

(b) *Swertia chirata* (Tib.: tig-ta; Eng.: Chiretta). This herb, dif-fused in Yol-mo between 1,200 and 3,000m, is used as an

²⁴ Philip Denwood, *The Tibetan Carpet*, Warminster, Aris and Phillips Ltd., 1978, pp. 23-4.

²⁵ A.F. Gammerman and B.V. Semichov, *Slovar Tibetsko-Latino Russkikh Nazvanni Lekarstvennogo Tastitel'nogo Syrya*, Ulan-Ude, 1963,, Nos. 103-5.

²⁶ S. Ch. Das, op. cit., p. 1215.

²⁷ *Medicinal Plants of Nepal*, op. cit., p. 26.

²⁸ A.F. Gammerman and B.V. Semichov, op.cit., Nos. 300 and 307.

antipyretic. Cf. S. Ch. Das, op. cit., p. 515: "growing in the Himalayas, largely used as an antidote against fever and liver complaints"; V.B. Dash, op. cit., pp. 75-6, where the spelling is: *ti-kta*; and *Medicinal Plants of Nepal*, op. cit., p. 49. Cf F. Hamilton, op. cit., pp. 85-6: "*Chirata*" is used "in slow febrile diseases, as strengthening the stomach". On the "Nepalese" *tig-ta* see L. Chandra, (ed.), f. 130.

10. Scrophulariaceae

Pterorhiza scrophulariflora (Nep.: *kutki*; Tib.: *hong-len*; Eng.: gentian). This herb is distributed in the Himalayas and a decoction known for its antipyretic properties is prepared from its root. Cf. L. Chandra (ed.), op. cit., f. 158 and *mDo-dBus* etc., op. cit., pp. 552-4. Cf. also F. Hamilton, op. cit., p. 100.

11. Chenopodiaceae

Chenopodium album Linn. (Nep.: *bethe*; Eng.: white goosefoot). This erect herb is distributed throughout Nepal up to 4,000 m. and cultivated in Yol-mo. Its seeds are cooked with milk to serve as a laxative. Cf. *Medicinal Plants of Nepal*, op. cit., p. 132.

12. Euphorbiaceae

Emblica officinalis (Gaertn.) sive *Phyllanthus emblica* (Linn.); (Tib.: *skyu-ru-ra*; Eng.: emblic myrobalan). The fresh fruit of this tree, distributed in the southern subtropical valleys in Nepal, are commonly chewed in Yol-mo. They dry fruit is ground and mixed with water to serve as an appetizer as well as a remedy against anaemia. Cf. V.B. Dash, op. cit., p. 277, L. Chandra (ed.), op. cit., f. 84, and *Medicinal Plants of Nepal*, op. cit., pp. 6-7.

Monocotyledones

13. Orchidaceae

Orchis latifolia Linn. var. *incarnata* (Nep.: *panch aunle*, "five fingers"). This herb is distributed in Himalayan areas such as Langtang, a valley bordering on Yol-mo, between 2,400 and 3,600m.

Its tuber is used for its tonic properties, either alone or combined with *Cordyceps sinensis*. Cf. *Medicinal Plants of Nepal*, op. cit., pp. 88-9.

14. Araceae

Acorus calamus Linn. (Nep.: *bojho*; Tib.: *shu-dag*; Eng.: sweet flag). This aromatic perennial herb is distributed in the Himalayan region at a height of 1,800 m. Its rhizome is pounded and mixed with water to serve as a balm and is applied locally in the case of pains from sinusitis. Cf. V.B. Dash, op. cit., pp. 166-7; L. Chandra (ed.), op. cit., f. 136; and *Medicinal Plants of Nepal*, op. cit., pp. 101-2.

15. Palmae

Areca catechu Linn. (Tib.: *dza-ti*; Eng.: areca nut). This tree is cultivated in eastern Nepal and its nut is used in Yol-mo as an antiemetic. (Cf. *Medicinal Plants of Nepal*, op. cit., pp. 146-7). Though such a use is not confirmed by modern pharmacopoeias, which dwell on the astringent and anthelmintic properties of the nut, this plant provides a good example of how unreliable and confusing may be an identification based on lexical and literary sources only. B. Laufer, op. cit., p. 70, translates *dza-ti* as "*Myristica moschata*". F. Hubotter, op. cit., p. 76 followed by A.F. Gammerman and B.V. Semichov, has: "*Myristica fragrans*", whose mace and nutmeg also help digestion. S. Ch. Das, op. cit., p. 1047 has: "the nutmeg" and "n. of the flower *Jasminum grandiflorum*". V.B. Dash, op. cit., p. 329 has: "*Jasminum grandiflorum* Linn.".

I have based the Latin nomenclature of the list above on the identification of our specimens by botanists, as that seems to be the only scientifically serious criterion of reference before starting to establish for which reasons and purposes the plants gathered are actually used. When botanical identification was incomplete or impossible, as for the plants in the following list, I have provided lexical identification in inverted commas, which in the light of the contradictions amongst dictionaries and other literary sources, probably owed to the various local nomenclatures, are mere suggestions yet to be confirmed through the identification of the actual specimens by botanists. Bearing that in mind, I have discarded as irrelevant

all lexical terms which were not supported by botanical evidence and all nomenclature which was not recorded "in loco".

As the officinal use of the plants mentioned above is obviously subject to a number of combinations, I shall limit myself to mentioning only a few. In addition to the combination of *Cordyceps sinensis* and *Orchis incarnata* mentioned above, there are also those of *Embllica officinalis*, *Terminalia belerica* and *Terminalia chebula* as an antipyretic, and of the two last plants as an analgesic against headaches. Incidentally, the local uses of the medicinal plants mentioned above more often than not correspond to officinal properties acknowledged by western pharmacopoeias.

The list of plants whose identification was limited to the family or merely lexicographic follows:

- A. *sBru-nag* (F. Hübötter, op. cit., p. 76: "*Nothosmyrnium japonicum* sive *Ligusticum sinense*"). This Umbellifera is cultivated at Cham Gyang, and its seeds appear to be ground and mixed with water to serve as an astringent in cases of diarrhoea. Cf. *spru-nag* in A.F. Gammerman and B.V. Semichov, op. cit., No. 334: "*Heracleum sinense*".
- B. *Dug-mo nyung* (F. Hübötter, op. cit., p. 52: "*Cynanchum sibiricum*"; A.F. Gammerman and B.V. Semichov, op. cit., No. 58: "*Antitoxicum sibiricum* (L.) Pobed" or "*Vincetoxicum sibiricum* (L.) Dcne."; and No. 228: "*Cynoctonum purpureum* (Pall.) Pobed."; V.B. Dash, op. cit., p. 301: "*Holarrhena antidysenterica* Wall.". Cf. S. Ch. Das, op. cit., p. 627: "medicinal fruit akin to *Karaya*", it "stops dysentery and cures biliousness", and V.B. Dash, op. cit., pp. 192-3). Its seeds are ingested for their emetic properties as an antitoxic in cases of poisoning. Cf. also L. Chandra (ed.), f. 184 and *mDo-dBus* etc., op. cit., pp. 177-9.
- C. *Go-snyod (waju)*; S.Ch. Das, op. cit., p. 226: "cummin seed"; V.B. Dash, op. cit., p. 283: "*Cuminum cyminum* Linn."; F. Hübötter, op. cit., p. 61: "*Foeniculum vulgare*"; A.F. Gammerman and B.V. Semichov, op. cit., No. 282: "*Foeniculum vulgare* Mill."; No. 57: "*Anisum vulgare* Gaertn."; No. 171: "*Carum buriaticum* Turcz." No. 172: "*Carum carvi* L."; No. 202: "*Cnidium dahuricum* (Jacq.) Turcz.". This umbelliferous plant is cultivated at Cham Gyang. Its seeds are ground, mixed with butter and made into a paste which is used

- as an analgesic against headaches. (Cf. V.B. Dash, op. cit., pp. 100-1). Both cummin and fennel are cultivated in Nepal. Cf. also L. Chandra (ed.), op. cit., f. 187.
- D. *rGün-'brum* (F. Hübotter, op. cit., p. 104; V.B. Dash, op. cit., p. 287; and A.F. Gammerman and B.V. Semichov, op. cit., No. 732: "*Vitis vinifera* Linn."; Cf. L. Chandra (ed.), op. cit., f. 96). Its sap is used as an ophthalmic remedy.
- E. *mKhan-pa (bzang)* (A.F. Gammerman and B.V. Semichov, op. cit., No. 79: "*Artemisia frigida* Willd."; F. Hubotter, op. cit., p. 35 has "mkhan-pa": "*Artemisia stelleriana*"; cf. L. Chandra (ed.), op. cit., f. 156). This *Composita* is cultivated at Cham Gyang and its leaves are used for their haemostatic properties. Cf. S.Ch. Das, op. cit., p. 179: "mkhan-pa is deemed useful in healing fresh cut wounds; it is also applied to swellings."
- F. *sLe-tres* (A.F. Gammerman and B.V. Semichov, op. cit., No. 653; F. Hubotter, op. cit., p. 100: "*Sophora flavescens*"; and B.V. Dash, op. cit., p. 343: "*Cyperus rotundus*" and "*Tinospora cordifolia*"). The tuber of this plant appears to be pounded and mixed with water to serve in the case of bruises and wounds. Cf. L. Chandra (ed.), op. cit., f. 134 and *mDo-dBus* etc., op. cit., pp. 546-8. B. Laufer, op. cit., pp. 5-6 quotes a Tibetan lexicographical work printed in 1741, stating that the word *sle-tres* derived from the language of Zhang-zhung (Western Tibet), and gives: "*Sophora flavescens*".
- G. *Ru-rta* (V.B. Dash, op. cit., p. 334: "*Saussurea lappa* C.B. Clarke"; F. Hubotter, op. cit., p. 94: "*Rosa Banksiae*"; cf. also Csoma de Koros, *Tibetan-English Dictionary*: "a king of spicy root"; H.A. Jaschke; in Lahul, "*Inula Helenium*";²⁹ and, as explained by Satis Chandra Acharya, quoted in S.Ch. Das, op. cit., p. 1186: "*Costus speciosus*"). Its roots and leaves are dried and ground, and the powder is mixed with water to serve as an expectorant, whereas the root alone seems to be applied locally in cases of fracture. Cf. L. Chandra (ed.), op. cit., f. 132.
- H. *gSer-gyi me-tog* (F. Hübotter, op. cit., p. 75, followed by A.F. Gammerman and B.V. Semichov, op. cit., No. 429: "*Momordica cochini-*

²⁹ H.A. Jaschke, *A Tibetan-English Dictionary with Special Reference to the Prevailing Dialects*, London, Routledge & Kegan Paul Ltd., 1972, p. 531.

chinensis Spr."). The powder from the seeds of this Cucurbitacea are mixed with water to serve as an antiemetic. Cf. L. Chandra (ed.), op. cit., f. 183.

- I. *Thal-ka rdo-rje* (V.B. Dash, op. cit., p. 299: "thal-ka": "*Cassia tora* Linn."; F. Hubotter, op. cit., p. 45: "*Cassia obtusifolia sive tora*"; A.F. Gammerman and B.V. Semichov, op. cit., Nos. 159 and 164 add: "*Caragana microphylla* (Pall.) Lam." and "*Caragana spinosa* (L.) D.C.". Cf. S.Ch. Das, op. cit., p. 574: "a medicinal fruit; is described as.... 'in shape like a dog's penis'.... Thal-ka rdorje (*sic*) relieves suppurations...."). The powder from its seed is mixed with water to serve in cases of infections of the urinary organs. Cf. L. Chandra (ed.), op. cit., f. 185.
- J. *Thulo kati* local name: padamchal. Cf. S.B. Malla,³⁰ "Rheum emod Wall. Rhubarb"; and as "patuswa" in *Medicinal Plants of Nepal*, op. cit., p. 61: "*Polygonum molle* D. Don."). It is used as an expectorant and seems to be used also to treat fractures. Cf. also F. Hamilton, op. cit., p. 100: "*Padam ehhal*".
- K. *g.Ya-kyi-ma* (A.F. Gammerman and B.V. Semichov, op. cit., No. 621: "*Saxifraga punctata* L."; No. 67: "*Aretostaphylos uva-ursi* (L.) Spreng."; No. 144: "*Caltha natans* Pall."; No. 554: "*Pyrola incarnata* Fisch."; No. 556: "*Pyrola rotundifolia* L."; No. 713: "*Vaccinium vitis idaea* L.". Cf. H.A. Jaschke, op. cit., p. 517: in Lahul, "a small high-alpine Saussurea"; S.Ch. Das, op. cit., p. 1151, adds: "the flower of which plant is an antibilious medicine"). This plant is common in Yol-mo; its leaves are pounded and prepared as a decoction which appears to be used cold as an antiemetic. Cf. L. Chandra (ed.), op. cit., f. 168 and *mDo-dBus* etc., op. cit., pp. 386-8.

May I just hint here to the circumstance that Tibetan apothecaries in Yol-mo resort to the use of mineral and animal products too. I shall limit myself to mentioning two: *rgya-mtshal* (Indian or Chinese cinnabar, red mercury sulphide, or native vermilion), with "heavy and cool" properties (Tib.: (*Tib-bail*), which is taken orally to "hold marrow and veins" (cf. L. Chandra (ed.), op. cit., f. 59 and F.

³⁰ In "Potentialities of Medicinal Herbs in Nepal", *Himalaya: Ecologie-Ethnologie*, Paris, C.N.R.S., 1977, p. 193, No. 27.

Hubotter, op. cit., p. 128); and the rare and highly expensive musk (Tib.: *gla-rtsi*), which is obtained from a male sexual gland of *Moschus moschiferus*³¹ (Tib.: *gla-ba*) a small deer hunted also in Tibet and the Himālayas. The gland (or musk pod) measures five to eight centimetres in diameter and two and a half in thickness, and weighs, when dried, about thirty grams. After the musk deer has been killed, the pods are removed with the musk still intact and then dried. Its grainy powder would be used for its disinfectant properties. In India and the Far East musk has been used traditionally for its supposed aphrodisiac, stimulant and antispasmodic effects (Cf. S.Ch. Das, op. cit., p. 254: "the musk eradicates snake-poison, kidney-disease, plague"; cf. also F. Hubotter, op. cit., p. 114 and L. Chandra (ed.), op. cit., ff. 78 and 233). Dried musk pods of the commercial grade "three" are supplied by Nepal, though already in Kirkpatrick's day musk deer did not appear to be as numerous as they used to be.³²

Another useful plant common in Yol-mo is *Lycopodium clavatum* Linn. (common club moss), a *Lycopodiaceae* distributed between 1,800 and 2,400 m in Nepal. The small size of its spores and their high content of finely divided oil droplets make for inflammability. They can be used, as lycopodium powder, in fireworks or flashlight photography and their properties are known in Nepal.

Although we realized that wild edible plants are gathered mainly during the spring, we did witness the consumption of *Gaultheria fragrantissima* Wall., a member of the Ericaceae family. This stout shrub grows not only in Yol-mo, but also in Churia and Mahabharat. As a matter of fact, apart from the occasional use of wild berries, the diet of the Yol-mo people is based upon locally grown crops such as apples and turnips (which were introduced there in the sixties), barley (which after being parched and ground into flour, *rtsam-pa*, is kneaded

³¹In *mDq-dByu* etc., op. cit., vol. III, pp. 16-17, the denomination *Moschus sifanicus* Buchner is preferred.

³²Cf. W. Kirkpatrick, op. cit., pp. 130-1: "Very little pure musk is to be obtained at Khatmanda (*sic*) and there is still less exported from Nepal". In Kirkpatrick's day, the "kustoorā" or musk deer was caught with snares made with a particular kind of mountain bamboo. On the subject of the musk deer, Kirkpatrick refers to S. Turner's *Account of An Embassy to the Court of the Teshoo Lama in Tibet*, London, W. Bulner & Co., 1800, pp. 200-1. Musk was a produce of Tibet and exported at least since the VIIIth century. It is now sold in Lhasa for about stg. 7.-. per 100 grams. S. Turner, op. cit., p. 381, indicates that a small quantity of musk was exported from Tibet to China in his day, and it is likely that it is so even nowadays. The same source mentions musk in a list of Tibetan exports to Bengal (*ibidem*. pp. 382-3).

with tea prepared in the Tibetan manner), buckwheat and potatoes. Millet and corn are used exclusively for the production of alcoholic drinks,³³ and mustard for the extraction of oil. Rice and wheat are carried to Yol-mo from lower altitudes.

Our search for ceremonial plants was more successful. Such plants, either individually or as ingredients for incense, are currently used for worship in the shrines of any house, monastery, or temple. The following samples were collected and identified:

Gymnospermae

1. Pinaceae

- (a) *Abies* cf. *spectabilis* (*dhup*; Yol-mo d.: *skal-da shug-pa*; Eng.: fir).

It is not uncommon at 3,000 m. Its leaves and white wood are used for the manufacture of incense (*dhupi*: for the wide use of this term, cf. also F. Hamilton, op. cit., p. 96).

- (b) *Cedrus deodara* (Roxb.) Loud. (Yol-mo d.: *shug-pa shing*; Eng.: Himalayan cedar). The reddish-brown coloured and intensely scented wood of this Pinacea is used not only as the main ingredient in the manufacture of Nepalese incense, but also as a fuel for the Buddhist pyres in this area of Nepal. A robust and lofty tree, often attaining 70 m in height, it is distributed in the western Himalayan region of Nepal between 1,200 and 1,300 m, although it can be found even at 2,700 m.³⁴ Cf. L. Chandra, (ed.), f. 98.

2. Cupressaceae

- (a) *Juniperus indica* Bertoloni sive *Juniperus pseudo-sabina* Fish. et Mey.; J.D. Hooker, 1882). The needle-like leaves of this shrub are denser than those of *Juniperus recurva*. Its branchlets are burnt for worship.

³³ Here the process of brewing may be mentioned. When the boiled grains have cooled down, some yeast is added, after which the brew is left standing for two or three days, until it has sufficiently fermented. After some water has been poured into it, the brew is considered to be ready for use.

³⁴ The Deodar Cedar was introduced in 1831 in Great Britain from the Himalayas and planted mainly for ornamental purposes. It grows there to 60 m in height and may be admired for example in the ornamental drives of the New Forest.

- (b) *Juniperus recurva* Buch.-Ham. ex D. Don (Nep.: *bairunpati*; also; *dhupi*). It is distributed in the temperate and alpine Himalayas from 2,300 to 4,000 m. Its branchlets are picked at the end of the summer and used either to manufacture incense, or else are burnt for worship. Cf. also F. Hamilton, op. cit., p. 97.

Angiospermae Dictyledones

3. Ericaceae

Rhododendron anthopogon D. Don (Nep.: *sunpati*; also: *dhupi*). This small shrub, 3 m high, is distributed in the alpine Himālayas at any altitude from 3,300 to 4,000 m. It is used in the manufacture of incense. If we have to believe the information given to us by the chieftain of Melemchi, Punya Vajra Lama, the sulphur-coloured flowers of this plant are picked at the end of the spring and used to prepare a concoction which, according to religious texts, will stimulate mental activity. Cf. also F. Hamilton, op. cit., p. 97.

4. Valerianaceae

Nardostachys jatamansi DC. (Nep.: *dzaributi*; Eng.: spikenard). This erect herb is distributed in the Himalayan regions at an altitude between 3,300 and 5,100 m. It is used to manufacture not only incense, but, according to our informant at Melemchi, also a perfume which is used by Lama women.

5. Compositae

Artemisia dubia Wall. (*Artemisia vulgaris* Linn.; J.D. Hooker, 1882) Nep.: *titepati*; Eng.: mugwort). This plant, plentiful between 1,500 and 3,600 m, is used either for the manufacture of incense, or else burnt on its own, in which case its dried flowers are preferred.

6. Undetermined

Da-li. We have been unable to positively identify this plant so far. According to H.A. Jaschke, (op. cit., p. 247), its name, in Tibetan, designates "several kinds of low-growing Rhododendron". S.Ch. Das, op. cit., p. 612, gives the spelling: *da-lis*

and defines it as "a species of dwarf rhododendron with fragrant leaves". The spelling *da-li*, however, is confirmed in L. Chandra (ed.), op. cit., f. 106. Flowers and blossoms of this plant are used for medicinal purposes. A.F. Gammerman and B.V. Semichov, op. cit., No. 575, confirm both the spelling *da-li* and the translation "rhododendron". Its root is used to manufacture incense.

Regarding the use of ceremonial plants in Yol-mo, this report may be considered to be virtually complete. The scarce samples of edible plants, particularly berries, which we could gather during our excursion, would justify a second journey to the area during the spring, in order to complete the research. The interest inherent to this type of study resides in a truly scientific attitude towards the use, preparations and properties of plants. Tibetan science is founded as much on observation as on the beliefs that there is no illness without a corresponding panacea in nature and that each plant is endowed with an individual utilitarian function. However naive this attitude may be, an attentive scrutiny of the uses of medicinal and edible plants in the field would probably show that they often correspond to properties acknowledged by modern western science, at the same time enriching it with more data. Many of the medicinal plants discussed in this article are in fact already exported from Nepal.

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