A SNUFFING-TUBE FROM TIAHUANACO

By Dr. Max Uhle

The implement shown on Plate 13 is a snuffing-tube for inhaling a powder by holding its upper end to the nostrils and placing the lower end in the powder. This use is proved by a number of analogous implements collected from the Indian tribes of Brazil and Venezuela.

It was obtained by the writer at Tiahuanaco in June, 1895, with other antiquities found on the surface of the ancient ruins, or discovered in plowing, or in small excavations, and sold to him by people of the village. He was assured that it was found in the same way. Its character shows that it was made at Tiahuanaco in ancient time.

The tube consists of the wrist or leg bone (metacarpus or metatharsis) of a young llama-like animal, as was confirmed by comparison at the Academy of Natural Sciences of Philadelphia.

The bone has been cut off at each end, and while at the upper end a part of the shaft has disappeared, at the lower end, bifurcating naturally, only the distal articulations have been cut away and each part bored, so as to communicate with the main tube. The caliber of the former is $\frac{1}{4}$, and that of the latter $\frac{3}{8}$ of an inch.
The bone is much scraped on all sides and engraved after two technical types—deep circular engravings and superficial linear scratchings (Fig. 19). The circular engravings confirm the antiquity of the object, as this kind of ornament was common on prehispanic implements of bone. The scratchings, unartistic and inexact, might be attributed to a recent time. The designs, however, indicate a prehistoric origin. On the front of the implement is a small standing human figure covered with a poncho. The nose only is marked on the face. Over the brow is a feather-like head-dress. The breast is covered by a shield-like ornament. Where the short legs were expressed, a small piece is broken, leaving them incomplete. A square frame partly decorated by zigzag lines surrounds the figure and is surmounted on one of its upper edges by an ornament which, by the opening of the mouth and a slight indication of nose and chin, rudely expresses an animal head. This ornament corresponds in character to bands ending in animal heads frequently found attached to relieve figures on the stone works of ancient Tiahuanaco.1 As the present Indian inhabitants of Tiahuanaco do not use or understand the ornamentation found on the ruins, the implement must be regarded as prehistoric and made at a time near to that great first epoch of Tiahuanaco.

There are some figures of less significance on the bone:

1 See Stübel und Uhle, Die Ruinenstätte von Tiahuanaco, 1892, pl. 8–21.
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A snake-like drawing\(^1\) of zigzag lines, represented with a nose and eye, and a small four-footed animal, possibly a quadruped or an insect. Each of these figures is directed towards one of the two branches of the tube, which formed the upper end of the implement when used. They may, therefore, represent a supposed vitality of the inhaled powder. There are also some lines on the front of the tube above the human figure, surrounding the circular engravings. Their meaning is clear only in part. It seems they were also intended to represent an animal (perhaps with two of the circular engravings as eyes), as may be concluded from the foot-like appendices.

The chronicler Garcilaso remarks that the ancient Peruvians used tobacco (sairi) for snuffing.\(^2\) He gives us the first clue to understanding the tube in question. Later Alexander von Humboldt\(^3\) stated that the Otomacos believed they could not take their snuff without tubes, and all that has transpired since proves that the same is true of all Indians east of the Andes who are addicted to snuffing. It is surprising, with this in mind, that the Peruvians, a people who also practiced snuffing, have not been suspected heretofore of using tubes.\(^4\)

Snuffing tobacco, for a long time confirmed only by the work of Garcilaso, was neither of mean importance nor small geographical extension in Peru. We are fortunate in now possessing increased material for the study of the ancient customs of that country in the old provincial reports, published since 1881 by Mr. Jiménez de la Espada at Madrid. We learn from them that the practice of snuffing must have been nearly general in

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1 While at Tiahuanaco the writer stated the existence of snake-figures not observed before (see Stübel und Uhle, l. c., p. 23 Anm 2) worked in stone, and as ornaments on pottery of the same period.


4 Snuffing tobacco was also practiced in ancient Mexico, and it might be supposed that there likewise it was not done after the European manner. Mr. Ling Roth, in Journ. of Anthropol. Inst. of Great Britain, 1887, p. 260, mentioned a snuffing-tube of Mexican origin in the British Museum, but I am informed, by kindness of Mr. Charles H. Read, that this was an error, he mistaking a snuffing-tube from the Madeira River, in the British Museum for Mexican.
the Highlands of middle and southern Peru, for it is reported from Jauja (middle)\(^1\), from Lucana (southern Peru)\(^2\), and from La Paz (Bolivia)\(^3\); and we have also to add Abancay\(^4\), Alca\(^5\), and Chumbivilca\(^6\), in Southern Peru, where tobacco, according to the reports, was used as a medicine. The mention of its use for snuffing for these latter places seems to have been omitted only for the sake of brevity, as in all other respects there is no difference in the notices.

We should probably have similar statements of the use of snuffing tobacco from the Highlands of northern Peru, if provincial reports from that region were published.

The custom of snuffing tobacco, as depending on ancient practices, is found elsewhere in South America only in the immediate neighborhood of the civilized districts of ancient Peru, as among all tribes of the Purus River according to the observations of Dr. Ehrenreich\(^7\) and among a plurality of tribes of the Ucayali River according to Marcoy\(^8\). In detail we know that snuffing is common among the Yamamadis, Ipurinas, Antis, Chontaquiros and Conibos.\(^9\)

As the districts of these tribes border the ancient area of

\(^1\) *Relac. Geogr.*, I p. 86: *é que no sabian antiguamente curarse, más de que despues quel Inca los señore6, hubo algunos que sabian sangrar con puntas de pedernal, y se purgaban con ucos frisolillos que llaman vilca, y tomaban el polvo de tabaco por las narices.*

\(^2\) I. c., I p. 192: *y ansí mismo usan para esternudar el tabaco molido, con lo cual dicen que siente provecho; I. c. I p. 211: y ansí mismo usan del zaire, que por otro nombre se dice tabaco, y lo toman en polvo en poca cantidad por las narices.*

\(^3\) I. c., II p. 76: *Hay tambien entre los indios tabaco, que ellos le llaman sayre, de que los negros usan mucho, y los indios de la raiz que llaman coro, y se purgan con ello y lo toman en polvos.*

\(^4\) *Relac. Geogr. II p. 209 and 218.*

\(^5\) I. c., II p. 19.

\(^6\) I. c., II p. 15.

\(^7\) *Beiträge zur Völkerkunde Brasiliens, 1891, p. 55 and 62.*

\(^8\) *Marcoy, Voy. à travers l’Amér. du Sud, 1869, p. 574.*

\(^9\) *Orton, The Andes and the Amazon, 1870, p. 197, mentions a different custom of snuffing tobacco in use among the Indians of the Napo: “This last they roll up in plantain leaves and smoke, or snuff an infusion of it through the nose from the upper bill of a toucan.” The brevity of the notice prevents us determining the relation of this custom to the others of snuffing tobacco.*
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Borba, Serpa, and other towns of the lower Amazon.\(^1\) Therefore it must be admitted that perhaps the word *pytyma çui* in the dictionaries is only derived from that industry, and it would be wise for us to delay the admission of the originality of the custom.—

There are from Haiti various accounts of the practice of snuffing a powder called *cohobba* (*or cobioba*) which intoxicated, caused visions, and was used especially in religious ceremonies. There is another account by Oviedo y Valdés,\(^2\) that the Haitians used to inhale the smoke of tobacco leaves laid over the fire by means of forked or single tubes. Numerous authors have confounded the above accounts. For instance, Mr. Ling Roth, in a meritorious article on the ancient Haitians, referred all those reports to the inhaling of smoke of tobacco.\(^3\) Von Martius likewise identified tobacco with *cohobba*,\(^4\) and Dr. Ernst, considering *cohobba* as tobacco snuff, supposed Oviedo to have erroneously confounded snuffing tobacco powder by tubes with smoking tobacco leaves in cigars.\(^5\)

Jefferys\(^6\) mentions the peculiar custom of the Haitians to lay the moistened leaves of tobacco over half-glowing coals, and in this manner to inhale the smoke.\(^7\) This notice may be consid-

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\(^1\) v. Martius, *Beitr.*, I p. 721.
\(^2\) *Hist. gen. y nat. de las Indias*, pt. I, b. 5, ch. 2.
\(^3\) *Journ. of Anthropol. Inst.*, 1887, p. 258.
\(^4\) *Beitr.*, I p. 720.
\(^6\) *Nat. and Civil History*, London, 1760, quoted by Ling Roth, l. c.
\(^7\) That Ernst in vain attempted to inhale the smoke by a snuffing-tube is no argument against the correctness of Oviedo's report, as he used a snuffing-tube of the Guahibos for that purpose, and it is possible that the wooden tubes used in Haiti, and illustrated by Oviedo, were of a larger caliber. The smell of tobacco and the powder of *niopo* is similar, as referred to by Gumilla, and the effect of the one compared with the other is so similar as to lead Gili to describe the *niopo* plant as a kind of tobacco tree. For the same reason the two powders are sometimes interchanged. According to Rich. Schomburgk's *Reise in Guiana*, III p. 103, the powder of *paric or paricarama (?)* is ignited and the smoke inhaled. Similarly the Haitians could apply snuffing-tubes for inhaling the smoke of tobacco. For *paricarama*, as referred to in Schomburgk's notice, might be compared the mention of *parica rana*, an acacia, as a medicinal plant in *v. Spix und v. Martius*, III p. 1187. *Rana* in Tupi signifies spurious, *v. Martius, Beitr.*, II p. 86.
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ered as an argument in favor of the correctness of Oviedo's report.1

Furthermore, in contradiction to what Mr. Ling Roth supposed, it is clear by the reports that the cohobba used for snuffing was a substantial powder.

The establishment of the latter fact does not determine the connection between the powder cohobba and tobacco. But the following facts will prove clearly that they were entirely distinct from each other.

1. The universal separation of cohobba from tobacco in

1 There is, perhaps, another circumstance more which supports Oviedo's description of inhaling the smoke of tobacco by tubes. Dr. Ernst himself points out that the Haitian name of the snuffing-tubes may have been taboca, which circumstance tends to confirm Oviedo's derivation of the word tobacco, from the name of the snuffing-tubes. The discovery that the Haitian snuffing-tubes were called taboca was made by Ernst nine years ago, anticipating the same discovery by the writer. It is true that Ernst based his discovery upon the idea that taboca signifies the snuffing-tube among the Muras, which is not the case (v. Spix und v. Martius, Reise, III p. 1075, v. Martius, Beitr., I p. 411). But I am able to produce now stronger evidence. Taboca in Tupi originally was the term for a kind of reed (compare v. Martius, Beitr., II p. 87). A hill das tabocos exists near the town of Caxias in eastern Brazil in the ancient Tupi region. Yves d'Evreux, Voy. dans le Nord du Brés., Notes par F. Denis, 1864, p. 404). This word exhibited a peculiar aptitude for spreading throughout the various languages of northern South America (similar to the Tupi: taeuara reed). It always signified implements actually or originally made of reed; for instance, boxes made of reed used for preserving the niopo powder, Mura (see v. Spix und v. Martius, and v. Martius as above), boxes for preserving coca (at Ega), v. Spix und v. Martius, III p. 1169, round nose plugs, ½ inch thick, 1½ inch long, of the Miranhas (v. Martius, Beitr., I p. 536; Padre Armentia similarly says of the Pacaguara in eastern Bolivia: they carry a taeuarita in their nose, Cardús, I. c., p. 291). The Juri Tabocas, a horde of the Juris, received their name from a lip plug of palm wood (v. Spix und v. Martius, III p. 1236 and 1280). The Passes also call the lip plugs taboca (I. c., p. 1204). In this way the name taboca may also have been given to the snuffing-tubes in Haiti, which is not surprising, as Dr. Brinton, in The Arawack Language of Guiana, 1871, p. 18, gives two other very significant proofs of Tupi words in the Taino language (Haiti). I believe there is no doubt that the modern name of tobacco is derived from the word taboca of Tupi origin, which, in Haiti, signified tubes; and it is to be regretted that Ernst gave up this derivation, impressed by the supposed error of Oviedo, so as to embrace as the correct one a very problematic and improbable derivation from Arawak tuka, to smoke; dattupaku, I shall smoke, changed by a supposed neglect in dattupaku.
the reports is contrary to any supposition of their synonymy.

2. The word cohobba, as Petrus Martyr, or oogioba, as F. Roman spells it, is not derived, as Ernst¹ and von Martius suggested, from the Tupi language, but is probably the same word as curuba and yupa, the Otomaco word for the Piptadenia powder according to the two authorities Gili and Gumilla,² and

3. The extreme strength of the powder as described by Petrus Martyr,³ exceeding that of tobacco, decides its different nature and its Piptadenia character.

It would seem strange if the Haitians should have learned from the continent the use of snuffing-tubes and not the powder used in connection with these tubes.—

The Relaciones geográficas, II p. 152, give the following account of a custom of the Indians who lived near Córdoba, in the Argentine:

“Toman por las narices el sebil, ques una fruta como vilca⁴; hacenla polvos y bebenla por las narices.”

The curious expression, they drink the powder with the nostrils, means without doubt that the Indians took the powder by means of an instrument like a tube. Concerning the word sebil, Napp⁵ tells us that sebil is in the Argentine the name of the Acacias. Now, the fact that Humboldt originally pointed out the nipo tree as a species of Acacia by mistake and von Martius called it Mimosa acacioides proves that Piptadenias and Acacias have sometimes been confounded. We know, further, that Piptadenia trees of the variety nipo are also common in eastern Bolivia and the Argentine (for instance Piptadenia

¹ Am. Anthropol., l. c., p. 136.
² Father Gili: curuba, Gumilla: yupa. If two persons so differently conceived the same name for the same plant among the same tribe, it is not surprising that the Haitian word oogioba is slightly different from the original word curupa.
³ Petrus Martyr, l. c.: Tanta est pulveris illius contusi vis ut sensum omnem ilico sumenti eum, tollat. Ut primum cessit insania, etc.
⁴ Probably also a Leguminoza, according to Middendorf, Wörterb. des Runa Simi, 1890, p. 459. A beverage made of it, served as purgative, but also as narcotic for foretelling in Peru and Bolivia, v. Tschudi, Beitr. z. Kenntn. d. Alten Perw, 1891, p. 171.
⁵ The Argentine Republic, 1876, p. 114.
macrocarpus, in the province of Tucuman¹), and as the bark of
the eurupau tree, which from its name and general description
may be a niopo tree, serves, according to Cardús,² to tan hides
in eastern Bolivia, so in like manner the bark of sebil is used
to tan hides, as I noted,
in the environs of Tucu-
man. All this leads to
the conclusion that the
tree, from whose seeds
the powder was made, is
related to niopo, and a scientific determination may perhaps show
it identical with niopo.³ The custom of snuffing sebil in the
environs of Córdoba was, therefore, derived from another part
of the continent, where snuffing niopo was practiced.

In examining the methods of snuffing in South America, we
observe some peculiar features which do not belong to all other
customs of the South American Indians.

The snuffing-tubes used are of various shapes, but all rest
upon two principal
types, one of which
may be pointed out
as the primitive,
the other as the
basis of all more developed shapes.

1. The primitive type is the single tube, which has been found
among the Yamamadis,⁴ Maubes,⁵ and in Haiti,⁶ and probably
occurred among many other tribes. This shape, as a general
rule, reappeared when tubes of the more developed shapes were

¹ v. Martius, Flora Brasil, l. c., p. 282.
² Cardús, l. c., p. 339.
³ After writing the above explanation I was informed by Dr. Niederlein
that the sebil trees of the Argentine, before classified erroneously as Acacias,
are acknowledged now as being Piptadenias (niopo, etc.). I could scarcely
have expected such prompt confirmation of what I supposed above.
⁴ Ehrenreich, Beitr., p. 55.
⁶ Oviedo y Valdés, l. c.
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missing. But being primitive, it possesses no comparative value.

2. The other principal type is the forked tube. It deserves attention in that it has been found in a wide geographical extension with its shape nearly unchanged. Its existence has been confirmed in the Highlands of Bolivia (Plate 13), among the Ipurinas (Fig. 20), among the Omaguas, Tecunas (Fig. 22), and Mauhes, among the Otomacos (Fig. 21), Guahibos and Yaruros, and also in Haiti.

The double-tubed instruments of this type found among the Tecunas, Mauhes and Ipurinas, represent only a variety in which the bifurcation of the upper has been continued to its lower end.

It is worthy of attention that the forked tubes of Tiahuanaco, the Orinoco River and Haiti, found at the periphery of the whole area of snuffing, and at great distances from each other, fully agree in form in contradiction to the slightly transformed forked tubes of the centre.

Fig. 22.—Snuffing-tube, Tecuna Indians, Amazon River. Munich Museum.

1 Ehrenreich, l. c., p. 62. I am indebted for the drawings of Fig. 20, 21, 23, 24 to the kindness of Mr. W. v. d. Steinen, of Berlin.

2 De la Condamine, l. c.

3 v. Spix und v. Martius, III p. 1318, and Atlas zur Reise, Tafel: Indische Gerätsch., Fig. 47. The instrument is preserved in the Munich Museum, and one of the figures in Ratzel, Völkerkunde, 1886, II p. 610, is a reproduction of it.


5 To compare Gili, l. c., and Alex. v. Humboldt, l. c. The snuffing-tube of the Otomacos, in the Berlin Museum, is perhaps brought back by Humboldt.

6 A snuffing-tube in the British Museum from the Guahibos is given by Ratzel, l. c., p. 611 Fig. 1. Another snuffing-tube from this tribe, preserved in the National Museum of Caracas, has been described and reproduced by Ernst in Verhandl. der Berl. Gesellsch.f. Anthrop., 1886, XVII p. 521.

7 M. E. de Rivero, Col. de memor. scientif., 1857, I p. 103 and 104.

8 Life of Columbus, etc., in Churchill, Coll. of Voy., Petrus Martyr, Oviedo y Valdés, l. c.
3. The tubes of this central sphere show still other transformations of the original forked type. Angular snuffing-tubes, as shown in Figs. 23 and 24, are common along the Ucayali River\(^1\) and in Chanchamayo, and occasionally found on the Amazon\(^2\) (Fig. 25). This type can only be explained as derived from the forked tube as its prototype, because in no other way the angular combination of two tubes could be accounted for.

4. The Witotos have an instrument, which consists of two bones crossed in the shape of an X, and by means of this two

![Fig. 23.—Snuffing-tube, one-third, Chanchamayo, Peru. Berlin Museum.](image)

individuals blow the powder into each other's nostrils, as shown in Fig. 26. This curious type is also derived from the forked tube. In a certain sense it represents a departure in the opposite direction from that which led to the angularly combined tubes. In the former case, the two arms of the original implement were separated, so as to admit a reciprocal use of the snuffing powder.

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\(^1\) To compare snuffing-tubes of the Conibos in the Berlin and British Museums, the latter one reproduced by Ratzel, l. c., p. 611 Fig. 2, and a snuffing-tube from Chanchamayo with arms of unequal length in the Berlin Museum; furthermore, the notes on the snuffing-tubes of the Antis in Marcoy, l. c.

\(^2\) The snuffing-tube of the Muras, in the Munich Museum, was reproduced by v. Spix und v. Martius, Atlas, Taf.: Indianer, Gerätsch., Fig. 63, and Ratzel, l. c., p. 610. Another snuffing-tube, consisting of two tubes joined in an acute angle, is reproduced by v. Spix und v. Martius, l. c., Fig. 49, but does not seem to have been preserved.
In the latter they were separated and differently joined, admitting only an individual use of the tube for one nostril or at the most by engaging another individual for blowing.

5. There remain very short tubes, joined at an angle and open at both ends, used by the Antis for inhaling the snuff with both nostrils. This shape might appear to have been the older type than the forked tube; nevertheless I am inclined to believe it a modification from that latter, which dominates in the area of snuffing, as explained above, and corresponds more closely as the archetype of all the others.

The extent of the changes in the shapes of the snuffing-tubes, as we have seen, was not great. The oldest type dominates at peripheral points of the area of snuffing widely remote from each other. Changes of the original type, apparently similar to shrinkage, took place in the centre. It is to be regretted that at present we have no knowledge of the snuffing-tubes of the environs of Córdoba.

Only two kinds of powder were used, tobacco and that of the seeds of *Piptadenia niopo*, and these within distinct zones. Furthermore, excepting the word *sebil*, only two primitive words, *curupa* and *paricá*, designated the latter powder in South America. Of these the word *curupa* belonged to a western, the word *paricá* to an eastern subzone. The latter word originated from the Tupi language, and has spread throughout northeast-

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1 Marcoy, l. c.
2 v. Martius, *Beitr.*, II p. 403. In the province Para the geographical name; Paricatuba, l. c., p. 519. Because of the Tupi origin of the word the Brazilians
ern South America\textsuperscript{1} and a large part of the Amazon region, its fixed use reaching westward at least to the mouth of the Javary River.\textsuperscript{2} On the other hand, the Omaguas on the Amazon, the tribes of the Orinoco River, and the ancient people of Haïti, all of different nationality, used the word \textit{curupa} or derivations from it.\textsuperscript{3} The slight modification the word has undergone in this area would indicate its dissemination among the tribes to have been the work of only a few hundred years.\textsuperscript{4}

prefer the name \textit{paricá} when speaking of the powder. Yves d'Evreux, l. c., p. 416.

\textsuperscript{1} In British Guiana according to Rich. Schomburgk, l. c.

\textsuperscript{2} According to v. Martius, \textit{Flora Bras.}, l. c., p. 283. A name of a river Curupatuba exists on the lower Amazon east of Santarem, and is translated by v. Spix und v. Martius, l. c., III p. 1325, as "\textit{niopo place}". If this explanation is correct (there are more words in Tupi sounding like \textit{curuba}, compare v. Martius, \textit{Beitr.}, II p. 393, v. Spix und Martius, III p. 1282), the name might seem to be a result of interchanges natural on such a river.

\textsuperscript{3}\textit{Curupa} Omaguas, \textit{curubá} and \textit{Yupa} Otomacos, \textit{nupa} Maypures, \textit{yopo} Yaruros, \textit{niopo} Orinoco tribes, \textit{cogioba} and \textit{cohobba} Haïti. Alex. v. Humboldt already called the attention to the curious fact that the tribes of the Orinoco River and the Omaguas of the Amazon showed some relation to each other by the word \textit{curupa}.

\textsuperscript{4} The comparatively late origin of the custom of snuffing \textit{niopo} becomes still clearer on considering in general the use of tobacco in South America. The latter occupies nearly the whole continent. The names for the tobacco
The character of the changes in the shapes of the snuffing-tubes, as pointed out above, would not lead to any other conclusions.—

The peculiar manner visible in the distribution of the use of snuffing would also be a good argument in the same direction. The practice is missing, as far as we know, in southeastern South America in the direction of Rio de Janeiro, but is very general in the Amazon Valley. Setting aside for a few moments the practice of snuffing of the environs of Córdoba, we have to come to the conclusion that east of the Andes it spread out through the Amazon system, and from there, without much difficulty, passed over to the Orinoco River and to more remote Haïti.

The geographical reasons for its distribution outweigh the national ones. While the Omaguas, Muras and Mauhes of the Tupi stock1 practice snuffing, the Mundurucus,2 who are also Tupis, and apparently the Tupi tribes3 of the southeast, do not use snuff. But in the Amazon Valley and north of it the practice of snuffing is common among Indians of different stocks, as Arawak, Tupi, Pano, Carib and others.4 All of

are much more differentiated than those of niopo. Some words, as, for instance, the Arawak word yaari, belong to great tribal stocks, having wandered with them. I might compare the general custom of snuffing niopo with the single fact of the late introduction of the Tupi word pytyma for tobacco in Chile, and also that of the distribution of the use of tobacco pipes in the southern parts of the continent by Guarani influences. Ancient tobacco pipes are found, for instance, in Rio Grande do Sul, the province of Buenos Ayres (Ameghino, Antiguedad del hombre en el Plata, 1880, I Pl. 7), where Tupis were living, and in Chile, and at the present time tobacco pipes are still in use among the Guaranays, Chiriguanos and Siriones of the Tupi stock in eastern Bolivia (Cardús, l.c., p. 79, 249, 282). Furthermore, the ancient Calchaquis may also have used pipes. I saw a pipe of soft stone, believed to be ancient, at Belen in the province of Catamarca.

1 Brinton, The American Race, 1891, p. 236.
3 For the same reason the idea of Ernst, who says the use of snuffing tobacco was characteristic of the Tupi tribes and derived from them (Amer. Anthropol., l.c., p. 135) is not acceptable.
4 According to Brinton, l.c., p. 249, 258, 266, 269, 271, 287, 292, and Ehrenreich, Zeitschr. f. Ethnol., 1897, p. 59, the tribes practising snuffing were distributed among the stocks as follows, Passes, (Maipures,) Tainos, Yamamadis, Ipurinas, Antis and Chontaquirois: Arawak; Paravilhanas (and Taman-
which confirms our conclusion that the dissemination of the use of snuffing niopo was one of the last phenomena in the development of the customs of the eastern South American tribes.

The question arises, Are there any indications as to the source of this practice?

I have attempted above to point out that the use of snuffing tobacco of the Ucayali and Purus Indians originated in the Highlands of ancient Peru. The areas of snuffing tobacco and snuffing niopo are contiguous. The intimate relation between the use of both powders is apparent by the analogy of the implements connected with them. It is, therefore, very natural to suppose that the one arose from the other. The practice of snuffing tobacco, according to my explanations, must have been of older date than that of niopo. As a consequence the use of the latter powder will have originated in the tobacco-snuffing area. Furthermore, the snuff of tobacco is milder than that of niopo, and the use of tobacco snuff medicinally in ancient Peru is well confirmed.

1 The secondary implements used for snuffing are also analogous. The snuff-box for tobacco powder of the Purus tribes (Ehrenreich, Beitr., p. 62) and of the Antis is made of a Helix, and, at least among the former, provided with a cylindrical neck. The boxes used by the Witotos for preserving the niopo powder are alike; the same is the case with that represented in v. Spix und v. Martius, Atlas, l. c., Fig. 48, and probably also with those used by the Yaruros, according to M. E. de Rivero, l. c.

2 Gili, Gumilla, Petrus Martyr, l. c. The powder of niopo is so strong that in northern Brasil and Guiana its use as ointment serves to produce intoxication (Yves d' Evreux, l. c., p. 416, Rich. Schomburgk, Reise, III p. 103).

3 Tobacco was used in ancient Peru, not only as medicine, but for other purposes, as religious ceremonies (Montesinos, Mem. antig., 1882, p. 16, and Relacion anónima in Tres Relac. de antig. Peruans., 1879, p. 141), in fortune-telling (Balboa, Histoire du Pérou, ed. Ternaux-Compans, 1840, p. 29), and also by priests to produce ecstasy (v. Tschudi, Culturhist. u. sprachl. Beitr. z. Kenntn. d. alt. Peru, p. 131). The medicine man of the Purus tribes produces ecstasy by snuffing tobacco (Ehrenreich, Beitr., p. 69). V. Tschudi says that the Peruvian priests fell in ecstasy by the use of green tobacco leaves, and Marcy, l. c., remarks that the snuff of the Antis was made of green tobacco leaves. Sairi (Tobacco) was the first name of the last reigning Inca. At Airaguancu, in Omasuyu, a plant called Topasair (Royal tobacco) was shown to Padre Ramos.
while the use of *niopo* is in general a vice. Vices often arise from abuses of medicines—medicines rarely do so from vices.

The distribution of the word *curupa* in a large area reaching from the Marañon to Haiti implies a western origin, and the word (as *curupaui*) is also found in eastern Bolivia, at the foot of the Andes, as the name of the same if not an analogous plant. Though other reasons could be found to explain the fact that the word of the Omaguas for the *niopo* tree is the same as that used in eastern Bolivia, the best explanation, perhaps, would be that both terms originated in the large area uniform in its extension of the languages spoken in the Highlands of Peru.

In the environs of Córdoba in the Argentine, in place of the word *curupa* the word *sebil* was used for *niopo*. For determining the country from which the Argentine custom of snuffing *niopo* originated, the following account given of these Indians of Córdoba in the same report may serve as a guide:

“This people, speak a language which they call Comechingona, and another, Zanavirona, though most of those who serve speak and converse in the general language of Peru (that is Kechua). They are people who, after their natural manner, clothed in wool of llamas, having a number of these animals, though somewhat smaller ones. . . . This people have but few rites and nearly the same as at Santiago.”

It seems, therefore, that the practice of snuffing *niopo* was introduced among these Indians from Peru, as were their other customs.

There is nothing published which points to the practice of snuffing the powder of *niopo* in Peru, if not in the report of the province of La Paz. In this province two powders were used as snuff—tobacco and *coro*. This *coro*, without any hesitancy, should be declared to be *curupa*, if it had not been re-

which had been introduced there by the Inca himself (Padre Sans, *Hist. de Copacabana*, 1886, p. 9).

1 At Santiago (de Estera) the language was also a dialect of Kechua, a useful grammar of which has been published by Miguel Angel Mossi, *Manual del idioma general del Perú*, Córdoba, 1889. It is, therefore, certain that these Indians also had similar rites as the ancient Peruvians.
ported as being a root. But the use of *niopo* being confirmed from the region of Córdoba, it seems to me more reasonable to suppose that the writer of the report was mistaken\(^1\) than that there existed a third powder, never elsewhere reported, with a name similar to that of *niopo*, which was taken as snuff in the environs of La Paz.

In the former case it would be probable that both powders were known in ancient Peru as snuff. In the dissemination of the habit the more vicious practice would have been chosen by the wild tribes of eastern South America, instead of the milder powder which was prevalent in Peru. At least I can see no other explanation of the Argentine practice of snuffing together with the general distribution of the practice in northern South America and the great range from south to north along the Andes of the word *curupa*.

The idea of the above discussion is to remind us of the Peruvian element as having been a most important factor in the distribution of customs in eastern South America. It is a well-known fact that traces of Incasic influences are not wanting east of the Andes and far into the eastern region. It is not necessary to call to mind the infiltration by Cuzco civilization of the larger part of the Argentine, the use of the Kechua language in the upper Amazon Valley, the use of coca far on the outskirts of Incasic domination, the ancient civilization of the Omaguas, linguistic influences upon foreign tribes of the Chaco\(^2\) and others. While this shows a wide range of Peruvian civilization, it does not prove an infiltration of the whole continent of South America. That this may have been the case has been pointed out, I believe, for the first time by Dr. K. v. d. Steinen in his observations on lexical references between the Kechua and idioms of eastern South America.\(^3\) My supposition of all South American practices of

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\(^1\) A *Clasificación de plantas medicinales*, printed at La Paz, mentions only under No. 56 a plant *Kkuru* (that is, *Q'uru*) as a “Calmante para reumatismo.”

\(^2\) The pronoun of the second person among the Mbayas, Abipones, and Mbocobies is *acami*, according to Yater, *Mithridates*, III, in Kechua *cam*.

\(^3\) I may here mention the word *tupa* (*tupana*) for God and thunder, common to all Tupi tribes (Omaguas, Apiacas, Tupinambas, etc.). It sounds like *tumpa* near the Andes among the Chiriguana and Guarayús (Cardús, l. c., 247, 310, 76, etc.), which reminds one very much of the Creator and Thunder
NOTE ON THE CRITERIA OF WAMPUM.

There are many other similar problems to be studied, for instance, the concordance of the pronoun of the first person of all Arawak tribes with that of the Kechua language, the similarity of the Arawak word *yaari* for tobacco with Kechua *sairi*, and the ancient Peruvian copper axe, found in a coastal river of eastern Brazil, and described by the writer, as the explanation given for its presence there by v. Tschudi (as being lost by the Paulistas) in 1887 was not entirely satisfactory.

NOTE ON THE CRITERIA OF WAMPUM.

By Daniel G. Brinton, M. D.

The essays of Woodward, Hale, Weeden, Ingersoll, Tylor, Holmes, Haldeman, Hamy and others on the manufacture and uses of wampum present many facts, but, except that of Tylor, fail to attempt exact criteria for distinguishing between the different dates of manufacture. That writer divides the beads into three periods, contrasted by the method of boring and the finish of the surface.

The first period is when the bead is finished externally by rubbing the shell on a stone until the facets unite in a fairly regular outline, and the perforation is obtained by boring from each end with a stone awl; the second period, when the surface was finished in the same manner, but the perforation made with a steel awl, such as were sold by traders; and the third period, when the beads were machine-turned and drilled in the Dutch and English factories. The stone-bored beads may be assigned, in round numbers, before the year 1600; after that date the art practically fell into disuse.\(^2\)

Professor Holmes doubts whether the tubular bead, which is the most common form of the wampum as seen in the celebrated "Penn belt" and other examples, is really an ancient shape. It would seem to have come in after the discovery. Unless examples from pre-Columbian graves can be adduced, all belts showing this shape, even if awl-bored and stone-polished, must rest under suspicion.1

Loskiel declares that shell wampum was extremely rare among the early Indians. They used beads of painted wood for their records and ornaments. Not till the Europeans sold the machine-made article did it become in any degree abundant.2

In a well-known passage of Roger Williams about wampum, he observes that the stone awl was no longer in use, and the introduction of the European article had already watered the value of the native article by one-half,3—a principle in economics which he tried in vain to make the Indians understand. This was in 1640, and it illustrates how doubtful would be a wampum belt even of that epoch. The one recently described by Prof. Hamy, and doubtfully assigned to the year 1673, is, therefore, of uncertain value.4

When the alleged wampum proves to be of glass beads, of course the European origin is manifest; but, as Haldeman showed by some striking examples, the specimen may date back to a time even before De Soto marched over the soil of the Mississippi basin.5

There seems from the above an uncomfortable doubt as to the genuine native origin of any of the wampum belts known to us, particularly as even the oldest authorities wrote after the European article had been introduced.

2 Geschichte der Mission der Evang. Brüder, p. 34.
3 Key into the Language of America, p. 176 ss.
5 In Smithsonian Report for 1877, "On a Polychrome Bead from Florida."