Sacred Connections with Cat-tail (*Typha*, Typhaceae) - Dragons, water-serpents and reed-maces

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Research

Abstract

Names are only one factor linking cat-tails to humans for over 3000 years. The generic name *Typha* was derived from Greek **typhe** that is linguistically related to Typhon, typhoon, and typhus. These words link four concepts - monsters, storms, diseases, and plants. A tangled history of the words and ideas linking them began with the ancestors of the Indo-Europeans perhaps before 1800 BCE. Either those views spread from the Old World into the New with successive waves of immigrants or there is a remarkable convergence. Confusion and other factors leading to misunderstanding and simpler translations are outlined.

Los nombres son solamente uno de los factores que relacionan los tules a los humanos por más de 3000 años. El nombre genérico *Typha* fue derivado del Griego typhe el cual esta relacionado linguísticamente a Typhon, tifon y tifus. Estas palabras relacionan cuatro conceptos - monstruos, tormentas, enfermedades y plantas. Una historia compleja de estas palabras y de las ideas que las relacionan comenzo con los ancestros de los Indo-Europeos quiza antes de 1800 AC. Esas ideas se propagaron desde el Viejo Mundo hacia el Nuevo Mundo a través de sucesivas oleadas de emigrantes o resultan de una convergencia extraordinaria. Se delinean varios factores y confusiónes que han llevado a traducciónes simplificadas y conceptos erróneos.

Introduction

"Of **tzité** [*Erythrina*] the flesh of man was made, but when woman was fashioned by the Creator and the Maker, her flesh was made of reeds [**puj**, *Typha*]." Part I, Chapter 3, Popul Vuh (Goetz & Morley 1954)

Cat-tails are used by people around the world as a source of food and household items, and hundreds of publications discuss this (e.g., Morton 1975, Saha 1968, Thieret & Luken 1996, Turner 1998). What has barely been suggested in the literature is that *Typha* also functioned as a significant symbolic link to deities. That aspect of the utilitarian cat-tails is critical to understanding its importance to humans. This discussion will not update accounts of uses but investigates the genus from a novel perspective - it explores common names and religions to show that *Typha* provides more than just edible and domestic materials.

Peré Jacques Marquette and Louis Joliet recorded a dragon image in 1673 of what indigenous Iliniwek called a **Piasa** on a cliff near what is now Alton, Illinois (Henson 1957). The **Piasa** was my introduction to the connection between the American pantheon and cat-tails in the 1960s, but I did not know that until about 40 years later. When I discovered that the Omaha considered the cat-tail sacred (Austin 2004), and that the Hopi used *Typha* during their **Niman Kachina**, it was clear that I was missing something. Then, when disagreement was found about the etymological derivation of the genus *Typha*, I realized

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there might be a connection between dragons, water-serpents, and cat-tails.

Methods

Library searches were employed to seek multi-cultural views and uses of *Typha*. Specifically, literature was searched for common names applied to *Typha* and any non-secular purposes for the plants. Names were translated where possible. Utilizations in a religious context were evaluated for similarities and differences. Based on the way Hopi and Omaha regarded *Typha*, the hypothesis was that some people consider the plants holy.

Figure 1. *Typha domingensis* Pers. with fruits and leaves. Everglades near West Palm Beach, Florida.

Four questions are explored: Do common names show diversity? Do any names point to cat-tails (*Typha*) being respected? Why are cat-tails revered? Is there a link between *Typha*, wetlands, and dragons?

Results

Common Names

People everywhere have names for these plants in their own languages, some surely as old as their uses. While no attempt has been made to sample all of the languages in which *Typha* has names, or to include a broad spectrum of those just in English, the Appendix gives 153 Old World and 141 New World names. These belong to 63 language families and subfamilies (Gordon 2005).

Some names are simple and others are complex. Simple names typically indicate great time depth of usage. Those that are translatable, while often more recent, sometimes yield additional information about people's views of the plants. That cat-tails have simple names (monomorphemic, unanalyzable root) in languages as different as Arabic, Greek, Maori, Russian, Sanskrit, Spanish, Japanese, and others indicates that the plants have been part of people's lives for thousands of years. Similarly, in the New World *Typha* has simple names in languages as old as Mayan (1200-600 BCE) (Cavalli-Sforza *et al.* 1994), and those as recently diverged as Apachean Diné (1300-1400 CE) (Hoijer 1956, Ruhlen 1998). Tepiman languages are 1000-50 BCE (Shaul & Hill 1998), and thus intermediate between Mayan and southwestern Diné. Names show also that *Typha* has been involved in not only secular life (e.g., Morton 1975), but played prominent roles in people's sacred lives.

The number of names within each language family varies in part because they may be applied to several *Typha* species. When more than one grows in a region each may be given a distinct variant of the name. This naming of species is complicated because of differing taxonomic philosophies.

Some common names have been used for more than one genus of plants. One example illustrates the problem, especially since it is the most extreme. The word "**tule**" was derived from Náhuatl **tollin**, which has long meant *Typha* to people in Mexico. Since

about 1837, "**tule**" was applied to the sedge *Schoenoplectus* (formerly *Scirpus*; Cyperaceae), particularly in California, but also elsewhere (Bourke 1892). Since the word "**tule**" was loaned from central Mexico to California, the application changed. The other instance is likely confusion because Bourke saw the Apache gathering pollen from stands of cat-tail, but the sedge is often present also (Long *et al*. 2003). At least the Chiricahua and Mescalero Apache did use the sedge pollen at times but it was often mixed with cat-tail (Castetter & Opler 1936). This discussion ignores references to the sedge.

Old World Connections

Although it is a contorted, complicated history only summarized here, the old proto-Indo-European gods of storms and volcanoes, gave rise to a name subsequently applied to plants, storms, and a disease. The connection that these deities, storms, and disease have with cat-tails is an allusion to smoke. That association developed before 3000 years ago.

Cat-tails belong to the genus *Typha*, a name that has been written for these plants since Theophrastus (372-287 BCE) called them **tiphe** (τὐφη) and Dioscorides (fl. AD 40-80) wrote **tiphes** (τυφης). During the pre-Linnaean period, most scholars retained the modern Latin spelling (Linnaeus 1753). While the early Europeans knew only two, now 8-13 species are recognized (Smith *et al*. 2004). The genus is worldwide in wetlands, and people everywhere have recognized it for millennia.

Figure 2. *Typha latifolia* L. with male inflorescence (above) touching female (below). Mt. Vernon, Illinois.

The Latin *Typha* is cognate with Greek **typhe**, as many have pointed out (cf. Nicolson in Smith 1993 for spelling on borrowing from Greek to Latin). Morton (1975) said simply that the generic name was taken from Greek "**typhos**, marshes." Others, including Thieret & Luken (1996) and Mitich (2000), concluded that *Typha* was from the Greek **typhein**, to smoke. Mitich (2000) thought that the plants were originally named because the seeds being shed from the spikes resembled smoke or a cloud. Thieret & Luken (1996) believed the reference was more likely because *Typha* was used "…for maintaining smoky fires or to the smoky-brown color of the fruiting spikes." Moreover, Thieret & Luken (1996) specifically excluded derivation from Greek **typhos**. Ward (2007) sided with Morton (1975) in favor of "marsh." The story of the generic name is intimately involved with Greek words for several natural and religious entities, and these authors have oversimplified its derivation.

Many westerners are introduced to the cat-tail by the Bible. While cat-tail is mentioned several times, probably the most famous occurrence in the Old Testament (Exodus 12:15) is to Moses being found in the bulrushes. **Suf** סוף is the Hebrew word used for *Typha* in that sentence. Zohary (1982) argued that the Hebrew **suf** is cognate with *Typha*, and that the edible Ethiopian grass seed **tef** (*Eragrostis tef* (Zucc.) Trotter) is cognate with both.

What has been omitted is that *Typha* and **typhe** are cognate with Greek words **typhaon**, **typhoeus**, **typhōn**, and **typhos**. All of these words are declensions of **typhein**, date back millennia, and are taken from Greek stories usually called myths.

Typhaon (τυφάων), **typhoeus** (τυφωεύσ), and **typhos** (τυφοσ), all variants of **typhon** (τυφῶν, τνφῶν), refer to a giant monster (Atsma 2007, Encyclopedia Brittanica 2006, OED 2006, Wikipedia 2007). The Greek **Typhon** is cognate with the Indo-European root **dheub**- or **dheubh**-, and Old English **dop** (deep) from Germanic ***deupaz**. By Indo-European times, the root word already referred to "bottom," "foundation," "depths," and the monsters believed to inhabited them (American Heritage 2000, Pokorny 1959).

Hesiod narrated Typhon's birth: "But when Zeus had driven the Titans from heaven, huge Earth [Gaia, Γαῖα] bore her youngest child Typhoeus of the love of Tartarus [Τάρταρος, deep place], by the aid of golden Aphrodite" (from Theogony). Typhon was a serpent-like dragon (Murison 1905) having a hundred heads, each breathing out flames. He was also a creator of springs, and is associated with water, including bringing rain (Frazer 1890). Among his children with Echidna (**ekhis**, "she viper;" the "mother of all monsters") were Cerberus (Κέρβερος, "demon of the pit"), the Lernaean hydra, and the Chimaera (Χίμαιρα, a fire-breathing female monster with a lion's head, a goat's body, and a serpent's tail). Typhon was mentioned by Homer's (Ὅμηρος, 800 to 700 BCE) "Hymn to Apollo", Hesiod (Ἡσίοδος, fl. 700 BCE), Aeschylus (Αἰσχύλος, 525–456 BCE), and Pindar (522 BCE to †443 BCE).

Zeus battled Typhon, inveterate enemy of the Olympian gods, and subdued him. One version says that Typhon threw what is now Mount Etna at Zeus and he deflected it, burying the monster under its mass. From his prison Typhon spews forth hot rocks and smoke. Thus, Typhon is the symbolic representation of volcanic forces.

Typhon, as the father of the Winds, causes dangerous storms. This deity's name is cognate with "typhoon," borrowed from the Arabic, Persian, and Urdu طوفان **tufân** (to turn around), and still in use to describe violent cyclonic storms of the Indian Ocean. Although **typhōn** and **tufân** are cognates, "typhoon" came into English from two directions (OED 2006). Typhoon also came from Cantonese **tai fung** (**ta**=big, **fêng**=wind). The Cantonese loaned into Portuguese left the cognate **tufão**.

An intriguing twist on this deity's name is that Murison (1905) thought that Typhon might be cognate with the Hebrew Ṣiph'oni, an obscure reference to what became known as the Basilisk. Murison claimed that Ṣiph'oni has no etymological equivalent in Hebrew and might have been loaned to them from Egypt and Syria. Perhaps Ṣiph'oni is analogous to Hebrew צָפוֹן **Sephon** [**Saphon**], "north," which was the abode of Set [**Sutekh**, **Setesh**, **Seteh**] ("the one of the wrappings"), who Herodotus (fl. 484 BCE) acknowledged was adopted from the Egyptians. Set, a Crocodilian divinity, dates from ca. 3150 BCE, and the classical Greeks (4th and 5th centuries BCE) wrote his name as Seth. Egyptians considered all animals that lived in water or spent part of their time in water to be associated with Set (Frazer 1890).

The Egyptians earlier had adopted their deity Set, with a name change, from the Sumerians who lived between ca. 6090-5429 calBCE (Encyclopedia Brittanica 2006, Lawler 2002, Wikipedia 2007). Herodotus knew the Greek chronicle had been adapted from the Egyptians, but what was unknown at his time was that the first written records of this story were created by the Babylonians. These documents, the **Enûma Eliš**, are estimated at having been written between the 14th and 12th centuries BCE, but surely the narrative is as old as 1800 BCE when the Hittites first appear in archaeological records. Arnold (2004) estimated the composition of the tale at 3000-4000 BCE. The Hittite story of Marduk fighting the dragon Tiamat passed through Egypt to become the model for Zeus and Typhon (Blust 2000, Güterbock 1948, Lewis 1996, Walcot 1956).

Another related variant is the Hindu story of the killing of Vritra ("the enveloper," an **asura** or dragon) by Indra (also a lightning and weather deity) (Blust 2000, Wikipedia 2007). According to the Rig Veda, Vritra was an **Ahi** ("snake") dragon with three heads that gathered all the waters of the world and held them captive until he was defeated by Indra. Zahhāk [Zohhāk], the analogous dragon in Persian stories, was known in ancient Iranian folklore and in the Avesta as Aži Dahāka. Zeus and Indra are analogous to Thor (Norse) who killed the sea serpent **Jörmungandr** [**'jœrmuŋgandr**] (Midgard Serpent), and Perun (Slavic) who overcame **Велесъ** (Veles [Volos], Old Russian) (e.g., Wikipedia 2007). Tiamat and Typhon are analogous to **Jörmungandr** and **Велесъ**; **Cernunnos** ("great horned one," Celtic) may be the same monster.

By contrast dragons of East Asia were largely benevolent. These beasts include the 龍 **Long** (Mandarin, 龙 Pinyin), 竜 **Tatsu** (Japanese), 룡/용 **Ryong**/**Yong** (Korean), มังกรจีน **Mangkorn jihn** (Thai), and **Rồng** (Vietnamese). The Chinese recognized a 虯龍 **Jiaolong** (horned dragon) reminiscent of those of the New World (Encyclopedia Brittanica 2006, Wikipedia 2007). All were wetland and ocean creatures that brought rain (Blust 2000). It is pertinent that the Chinese called *Typha* leaves the 龍鬚 **lung sou** [**lóng xū**, Mandarin] (dragon's beard) (Mathews 1944).

As an indication of the widespread incorporation into Old World views, *Typha* was included in Ainu riddles in Japan (Taylor 1947). The Ainu have a riddle that asks, "What looks at the setting sun from behind?" The answer: cattail.

The other spelling is Latin **typhus** (from Greek τὔΦοσ). In English, "typhus" originally meant pride, haughtiness, or conceit, but by 1785 was applied to an infectious fever caused by *Rickettsia*. English-speakers call that fever "typhoid" (**typhos**=smoke, **-oid**=resembling) because of

the smoky or lazy state of mind of those affected (OED 2006).

Another biblical reference that led to incorporation into the Christian religion was that of the crucifixion. The Bible states: "And they smote him on the head with a reed, and did spit upon him, and bowing their knees worshipped him" (Mark 15:19, King James Version, translated 1604-1611). The English came from the Latin Vulgate that was finished about 405 (Encyclopedia Brittanica 2007). The Vulgate has: "*et percutiebant caput eius harundine et conspuebant eum et ponentes genua adorabant eum*." *Harundo*, the basis of *harundine*, can mean reed, cane, fishing rod, limed twigs for catching birds, arrow shaft, or pipe. Oddly, the word *harundo* is not Latin but of Germanic derivation, having been taken from Old English **hréod** (OED 2006). Certainly, **hréod** gave rise to the modern English word "reed" (cf. Austin 2004). It is not known why Jerome (Eusebius Hieronymus, 347-419), who was born in what is now Croatia, used this word in the Hebrew to Latin translation. Biologists identify *harundo* as either *Phragmites* or *Arundo* (both Poaceae). Both *Phragmites* (Hebrew קנה **kaneh**) and *Typha* (Hebrew סוף **suf**) grow in the area where the biblical events occurred, but either Jerome did not know the meaning of סוף or did not know that it was *Typha*.

Because of the Hebrew or Vulgate reference, the Christians of the Middle Ages (500-1500) began using cat-tails in artwork. *Typha* appears as part of the scenery in the tapestries of unicorns (Marquand 1938); both plant and animal were allusions to Christ. Paintings by Flemish artist Sir Anthony Van Dyck of Jesus' mock trial have him with a cat-tail in his hand as a scepter. Even Leonardo da Vinci included *Typha* (Meyer & Glover 1989). Could this view be the basis for the name "reed-mace"?

The stories of dragons and cat-tails are variants on the same theme that date back to the rise of Eurasian and Asian cultures. Because the underworld dragons are associated with water and *Typha* may be the most frequent plant in the wetlands, all stories implicate dragons, water, and cat-tails as being connected. Some of the words used actually link them, e.g. **Typhes**, **typhaeon**, **Zrggavera**.

New World Connections

A widespread theme in indigenous American religions is that people emerged into the current world from an underworld or previous world (e.g., Hudson 1976, O'Bryan 1956, Saxton & Saxton 1973, Wright 1988). Because that lower region is populated by monsters that were left behind when humans and other animals emerged, the nether area is to be placated. These fearsome things approach the surface through caves and wetlands. Important among these powerful beings are those called Water Serpents, Horned Serpents, Plumed Serpents, or some similar name (e.g., **Awanyu**, Tewa; **Okikŏ:wî:**, Mikasuki; **Kolowisi** <**Kolowissi**>, Zuni; **Itzamna** or **Kukulkan**, Maya; **Mi•ʔs-kenu•pik** <**Kinepíkwa**>, Algonquin; **Onyare**, Mohawk; **Palraiyuk**, Eskimo; **Paalölöqangw** <**Pálülükoñti**, **Palulokong**, **Palulukon**>, Hopi; **Piasa** <**Piasaw**, **Païssa**>, Miami; **Quetzalcoatl**, Náhuatl; **Sisiutl**, Kwakiutl; **Sinti'hollo'** <**Sintholo**>, Chickasaw; **Tiéholtsodi**, Navajo; **Uktena**, Cherokee; **Uŋkéegila** <**Unktéhi**, **Unktelii**,

Figure 3. Modern dragon sculpture near Tucson, Arizona. On the slopes of the Sierrita Mountains, Pima Co.

Uhktena>, Lakota; **U'´-tken'**, Tuscarora; cf. Elliot Smith 1918, Fewkes 1893, Gatschet 1899, Gray 1922, Henson 1957, Hewitt 1889, 1909, Masthay 2003, Mundkur 1984, Sturtevant 1955, Swanton 1928). These powerful entities were part of the pantheon from the Eskimo (Gill & Sullivan 1992) to the Iroquois of New England (Harrington 1906), the Chimakuan and Salishan people in the Puget Sound area (Ludwin *et al*. 2005), and south through the Tewa (Parsons 1926b), Hopi (Fewkes 1893), the Aztecs (Boyd 1996, Griffith 1990), the Maya (Boyd 1996), the Sumu of Nicaragua (Rands 1954), the Toba of Argentina (Méteaux 1946), and the Mapudungun [Mapuche] of Chile (Mundkur 1984). The Water Serpent dates to at least the Hopewellian people (ca. 200 BCE to CE 500) of the Mississippi Valley (Brown 1997). Many linguistic groups viewed the deities of the world above humans and those in the underworld as in constant conflict (e.g., Howard 1960, Hudson 1976). Humans needed to make gifts to both or the struggle might escalate and involve them.

A few examples illustrate the importance of *Typha*, as do its many names (cf. Appendix). Essentially, the genus has been vital from at least the Maya of Mexico and Central America through North America into the boreal zone. It was probably equally important in South America, but fewer data are available from there.

The Maya may be descendants of some of the first waves of people to reach the New World (Cavalli-Sforza *et al*. 1994). Links in Mayan languages, toponyms, and beliefs tie their past with *Typha*. Mayan writing includes the glyph sounded as **pu(j)** or **puh** (Boot 2002, Mathews & Bíró 2006). Their classical name for Teotihuacan was Puh ("Place of Cat-tails"), and the word continues today (cf. Appendix). Sachse & Christenson (2005) suggest that Tulan ("Place of Cat-tails") possibly dates to Olmec times (1200–600 BCE) and that the name is a metaphorical reference to a place of origin. For example, the Popul Vuh asserted that individual lineages of Mayans began at Tulan (Akkeren 2003). The K'iche' named their capi-

Figure 4. *Typha* stand in Collier Co., Everglades, Florida.

tal Q'umarkaj ("Place of Ancient Cat-tails"). **Tollan** means the same in unrelated Náhuatl. Indeed, the name of the Toltecs who gave rise to the Aztecs is based on **tollin** (cat-tail) and **teca** (to exist, to be with) (Siméon 1885).

Several tribes have clans named for *Typha*. Among the Peigan Blackfoot they are the **Aapáíaitapi** (Franz & Russell 1995); Cahuilla call theirs the **Mi-ke-the-stse-dse** (Cat-tail People) (Rollings 1995). Paiute have a Cat-tail-Eater clan (Fowler 1992) and San Juan Tewa had a Ye clan (Cat-tail) (Parsons 1924).

Takelma, Penutian people in Oregon, considered *Typha* a powerful plant. When someone wanted to end a heavy rain, they sang a song mentioning **duyùm** (cat-tail) (Sapir 1907). This song went: "**Gwinéɛ di ha-uhánɛsdaɛ Geɛnè**." (To people in house). "**Dīt'gāyúk!umāada duyùm ɛalp!ī its•!ō'lts•!alhip**.'" ("How long is it before thou wilt cease? So long hast thou been raining! [To people in house]. Do you burn cat-tails toward the west?").

Cat-tail plays a pivotal role in the Mono story of Ninitikati (Walking Skeleton) of California where *Typha* helped a girl escape this monster (Gifford 1923). After Walking Skeleton had chased her and she had escaped several times, she arrived at an aunt's. This relative hid her in a basket covered with cat-tails. Eventually, she lived with Eagle and had a large number of children with him. These offspring gave rise to the Miwok, Mono, and Yokuts tribes.

Figure 5. Cat-tail leaves reflected in water. With *Pistia*, *Azolla*, and *Lemna* floating on surface. Palm Beach Co., Everglades, Florida.

In New England and Canada, the Abnaki tell of Raccoon who killed all but one of a family of juvenile Sables. Finally the father caught up to Raccoon in a wetland and tried to kill him. Raccoon told Sable "The only way you can do that is to hit me with a cat-tail stalk!" Sable did so, and Raccoon escaped because of a cat-tail (Speck 1935). A similar theme occurs in "How Glooslap conquered the Great Bullfrog" among the New England Micmac and Passamaquoddy (Leland 1884, Smith 1994). These Algonquian stories bear a striking resemblance to that of East Indian Vritra because the antagonists were hoarding water.

Others pay homage to the underworld by using cat-tail spikes, leaves, or other parts. Pointing to great religious importance and antiquity of cat-tails among New World people is Gilmore's (1909) comment that the Omaha "…display of sprays of the plant … indicate the sacred character of the article or place with which it was connected."

Tribes in both Algonquian and Siouan language families had the Calumet or Pipe Ceremony. Although those languages families are unrelated, they share the word **Wawan** [**Wáwą**] for the ritual. Literally, **wawan** in Algonquian languages is "egg" (Michelson 1935, Proulx 1984, Uhlenbeck 1924) and the ceremony is named that because it was an adoption event for redistribution of wealth (e.g., Alexander 1933, Dorsey 1896).

The **niniba weawan** or "pipe," was a critical part of the **Wawan** ceremony, and a cat-tail was essential for creating it (Gilmore 1919). The "pipe" was not made for smoking but had the head and neck of a duck (probably Mallard, *Anas platyrhynchos* L.) in place of the bowl (Dorsey 1896). The blue pipe-stem was

a cat-tail (Gilmore 1919). Both the duck and *Typha* show reverence for the underworld. Another practice indicating that the **Wawan** was an old ceremony involving *Typha* is its mention in traditional stories and songs (Dorsey 1892).

Dunmire & Tierney (1995) noted that *Typha* was used in ceremonies and dances at most Pueblos. To Pueblo people, the cardinal points may be indicated by plants. The Acoma have *Typha* as part of their origin story, and used leaves on prayer sticks as a symbol of the south (Stirling 1942). Tewa use the cat-tail to make the Bear Clan **kachina** mask **mụkwati** (the old man). This mask is not of skin but of yucca with a "squash blossom" made of cat-tail on one side (Parsons 1926a).

The Hopi planted *Typha* with other plants near their homes (Whiting 1939). Not only do Hopi incorporate cattails as part of their concept of utopia (Hirschman 2002), but they also use a bundle of leaves and fruiting stalks in the **Niman Kachina** (also called Home Dance) at Hotevilla (2005 artifact with C. R. Szuter & T. E. Sheridan), among other villages.

Acoma also include *Typha* in the story of the Pai'yatya'mo and Yellow Woman where he literally loses his heart to the K'o'tcininak' sisters; they cut it out, wrapped it in cattail fluff, and put it in a jar (Benedict 1930). This association of cat-tail fluff with death is similarly found among the Salish of the Pacific Northwest who buried their dead with it (Ostapkowicz *et al*. 2001).

Figure 6. *Typha* in pool at ruins of Pachamac, near Lima, Peru.

An ancient offering to deities was pollen. Originally, the pollen was from cattails, and that remained a prime source for some tribes. Once maize (*Zea mays* L.) became established, pollen from that became culturally more important in some groups (e.g., Matthews 1902). Bourke (1892) pointed out that the people of the Pueblos uniformly used pollen as a blessing, with the Acoma and Laguna calling it **hinawa**. He does not clarify if they used pollen from *Typha* or maize.

Bourke (1892) recorded that the Zuni called "pollen" **kunque**. Stevenson (1915) did not mention cattails among the Zuni; neither did Cushing in Breadstuff (1920) or other publications. However, Wright (1988) noted that the Zuni considered *Typha* around springs as indicators of the supernatural, an allusion to their point of origin ("**sipapu**" or **shípapolima**).

Currently the Pueblo inhabitants bless with corn pollen or even cornmeal instead of cat-tail pollen. At least the Acoma, Hopi, Laguna, Isleta, Western Keres, and Zuni consider pollen an important element in rituals (Bourke 1892, Jones 1931, Swank 1932). Hill (2002) suggested that maize cultivation came to the Southwest and onto the Colorado Plateau between 4000 and 3000 years ago (1500-1000 BCE). Huckell & Toll (2004) found that maize agriculture was integrated with plant gathering by those dates. If dated correctly, then the persistence of cat-tail pollen as a ritual blessing into the present points to its historical importance.

The last groups to arrive in the Southwest were Apacheans (Indé, Apache and Diné, Navajo). These two cultures migrated into Arizona and New Mexico from the north during the 1400s or 1500s (Ezell 1983, Hoijer 1956, Wilcox 1981).

The Diné origin account clarifies the fundamental nature of pollen. According to that saga, "The Creator had a thought that created Light in the East. Then the thought went South to create Water, West to create Air, and North to create Pollen from emptiness. This Pollen became Earth" (Smith 1998). O'Bryan (1956) provided a similar version. Apaches called pollen **hadndín** <**hadídíín**> (Bourke 1891, 1892), and they believed that it was scattered along the face of the heavens to form the Milky Way. Pollen was used in all their ceremonies (Bourke 1891, Farish 1918), and originally both Apaches and Navajo used cat-tails (Matthews 1902). Although Navajo have now largely replaced *Typha* with corn (O'Bryan 1956), several ceremonies still require cat-tail pollen (Elmore 1944, Vestal 1952).

Sometimes pollen was prepared by putting live animals into it (Matthews 1902). The animals must be released alive after being used or the pollen was considered "dead." Bluebirds (probably *Sialia*), yellow warblers (*Dendroica petechia* L.), and hummingbirds were particularly favored, but grasshoppers were also employed. Even the **tiníléí** <**tińlé•i**> (Gila monster, Navajo) was used (Wyman 1936b). Pollen thus prepared took on the energy and spirit of the temporary captive. This practice dates into the deep past and is included in the origin story of the Navajo where the young water monsters (**téehooɬtsódii** <**tiéholtsodi**>; **téeh**, deep water, **hooɬtsóód**, it grabs, **ii**, the one) were covered with pollen before being released (Matthews 1902). This blessing with pollen was believed to bring rain, game, and good fortune.

Colors are associated with directions among many pre-European people in the New World. The color indicating a particular direction varies with tribe, but two examples suffice to show the general association (Lamphere 1969). Among the Navajo, the west is indicated by yellow and **teeɬ tádidíín** <**tquel tqa-di-tin'**> (yellow pollen, literally "cat-tail pollen") was the original blessing material (Matthews 1902). Blue is associated with the south and **tádidíín dootɬ'izh** <**txatitʃi'tootɬ'ij**> (blue pollen, ground flowers of *Delphinium*) denotes that connection and invokes the benevolence of spirits from that region (Matthews 1886, 1902, Wyman & Harris 1941).

A small sack of pollen was given to every Apache child born, and **hadndín** was carried by warriors (Bourke 1891, 1892). When a rattlesnake was encountered, it was customary to throw a pinch of **hadndín** on its trail and request that it be good and return to its home (Bourke 1891). Pollen was spread on the ill, their attendants and family, and on the **diyinn** <**izzénantan**> (shaman). Other items were similarly blessed with cat-tail pollen, including medicine cords (Day 1950). Medicine cords often contained stone "arrowheads" used by earlier cultures that the Apaches and Navajos consider lightening "arrows" or "thunder's knife" (Day 1950, Young & Morgan 1980). Sometimes, the cords also contained fragments of lightning-splintered wood. During storms, both tribes sprinkled pollen and admonished the lightening to behave (Hildburgh 1919, Begay & Maryboy 2000). Indeed, pollen served as a blessing to aid prayers to all things supernatural or at least powerful.

Navajos are famous for their many ceremonies, and pollen was an integral part of old and modern events (Haile 1938). Among those requiring cat-tail pollen are the **Níɬch'ijí Noodoǫǫ́zjí** <**ńɬč'iʒí nodǫ́zʒí**> (Striped Windway, which is a **Tí'díɬt'é Hatáál**, injuryway) (Wyman & Bailey 1946), Deer Windway and **Níɬch'ijí Ńlóee** (Hail Windway) (both **Hózhǫǫjí Hatáál**, peacefulway chants-with-pollen), Talking God (**Haashch'éeɬti'í**) Earth Song (a **Hózhǫǫjík'ehgo**, blessingway) (Wyman & Bailey 1945), and the **Na'at'oyee Bikąʼjí** (Male Shootingway; to appease thunder and lightning) (Elmore 1944). In the Male Shootingway not only is pollen employed but necklaces and wristbands are made of *Typha* leaves (Mayes & Lacy 1989). Perhaps the Navajo considered *Typha* too powerful to consume, as they reportedly never ate it (Mayes & Lacy 1989).

Cat-tail pollen was used among the Apache in the early 1900s during the Christian-influenced event called **dahgodiɣáh** (they will be raised up) (Goodwin & Kaut 1954). Even now, the Apache gather **hadídíín** and manage their lands to assure its availability (Long *et al*. 2003). Pollen was at least a blessing if not a component of sandpaintings among both Apache and Navajo (e.g., Matthews 1885, Russell 1898).

Discussion

Linnaeus (1753) delighted in using words with multiple meanings and origins for generic names and achieved that goal when he used *Typha* for cat-tails. *Typha* has historically been interpreted as being from Greek **typhos** (marsh). While that is correct, the word also may be interpreted as from **Typhe** (smoke, from **typhein**) and Typhon (the dragon). The other derivations show that the association with humans is markedly more complex than previously thought.

Reminiscent of cacao (*Theobroma*) and maize (*Zea*), cat-tail evokes dyads of views from people—common and treasured, staple and tribute, profane and sacred (McNeil 2007). *Typha* in and of itself is no more significant than other plants that play roles in people's lives. However, as with frogs, snakes, and turtles, the fact that cat-tail grows in wetlands caused humans around the world to associate it with the powerful and fearsome beings that inhabit

the underworld. That association is because people consider caves and wetlands to be gateways or portals to the nether regions. The various versions and beliefs bear a remarkable resemblance to each other and may result from evolution of beliefs and diversification held before humans reached the New World. The position that they are homologous has been held by many (e.g., Bengtson 1994, Bourke 1891, Elliot Smith 1918, Mundkur 1984, Steward 1960, Wilson 2005). Blust (2000) argued that belief in dragons may be tens of thousands of years old but that, as people dispersed over the earth, they changed the basic concept differently by modifying it to reflect local biotas. The same antiquity and evolution must be true with *Typha*.

Since at least the time of the people who gave rise to the Indo-Europeans, *Typha* was used as an allusion to the nether region. Virtually all religions make ample use of symbolism, and this plant lent itself admirably to that purpose—particularly when people believed that saying the name of a specific spirit or being might draw its attention to them and result in harm.

Reference to the underworld was accomplished in several ways. The fact that the Greeks called cat-tail **typhe** indicated that they connected it with the nadir. That relationship was through comparison to an important supernatural being who showed his presence by sending smoke to the surface through volcanoes and in storms. The Greeks called him Typhon, and he was visualized as a serpent-like dragon. This monster has analogs across Europe, Africa, Asia, and Australia (Blust 2000).

Belief in dragons and serpent-like creatures circles the world, but the shape and abilities of the beasts vary with language and culture (Blust 2000). In Asia, these are mostly benevolent creatures, although some were malevolent—like the Japanese **Yamata no Orochi** (八岐の大蛇, big snake of eight branches). Dragons are famous for destructive activities among Western cultures, and legends, stories, and books in Europe are rife with them, e.g., Tolkiens' trilogy, **Y Ddraig Goch** ("the red dragon" in Welsh), **Níðhöggr** ("malice striker" in Norse), and Harry Potter books. Arguably, the oldest name for *Typha* in southern Asia is Sanskrit **Zrggavera**, a serpent-demon. New World dragons are Horned or Plumed or Water Serpents. These are part of the pantheon of people from the Eskimo to at least those of the Gran Chaco of Argentina and Mapudungun of Chile.

The number of simple names of *Typha* attests to great age of association with humans. Even in languages where there are simple terms for cat-tails, there may be others that are probably of more recent application. Newer names may exist because the indigenous people no longer remember the simple terms, or because they have withheld those names for some reason. One reason for not revealing a sacred name might include name taboos. Even the compound names that may be broken into components often include elements that are simple.

Simply displaying a bundle of leaves and fruit-spike during the **Niman Kachina** of the Hopi also appeals to underworld inhabitants. Inclusion of a fruit stalk among the Algonquian and Siouan people is another power-invocation.

Figure 7. **Totora** (Cat-tail) leaves being gathered in marsh. Cañete, Peru.

Color is a more abstract allusion. For example, blue and yellow were associated with south and west among the Navajo. Both colors are symbolical links with nature, blue with evening twilight and blue sky, yellow with cornmeal and pollen. At another level, the colors are the symbolic emblems of peace, prosperity, and happiness.

Several references to pollen among the Navajo trace to their origin narratives. In that oratory when a war-god bids his enemy to put his feet in pollen, he compels them to peace. When a Night Chant devotee prays, "Happily on a trail of pollen, may I walk," they are requesting a happy and peaceful life (Sanders 1973). The statement im-

plies some kind of pollen—it may be general or a specific plant.

Pollen from cat-tails is an obvious way to invoke a blessing from power-carriers. Since pollen became Earth in origin stories, and Earth represents the Earth Mother or **'Asdzą́ą́ Nádleehé** (Changing Woman) to the Navajo, pollen invokes her blessing. She is beneficent, loves humans, and sends the rains of summer and spring thawing. Changing Woman is the deification of fruitful nature, and pollen use requests these blessings. Navajo sacred speech and songs speak of haze and the smoky dimness of the horizon due to materials in the air like pollen. This is a reference to pollen as emblematic of the morning and evening stars.

"Pollen" among some indigenous Americans is not always the male plant gametophyte. Some deem dust in the air as "pollen." Others considered the yellow material gathering on pool and spring surfaces "water pollen," although in that case they were incorrect only about its source—it came from wind-pollinated trees like pines (*Pinus*). This generalized view of the close nature of "pollen" and other power-fragments of the Earth is an ancient concept spanning the earth, as is that of dragons or water-monsters.
While Bourke (1892) made a number of spurious comparisons of pollen with several New and Old World peoples (e.g., **tzohualli**, now known to be seeds of *Chenopodium*, cf. Austin 2004), he made others that are intriguing. He quotes from studies of East Indian, Egyptian, Japanese, and Ojibwa uses of pollen as a blessing item. There are several references among these to the regeneration powers of pollen. All of this symbolism suggests long belief in the power inherent in pollen or other "dusts," including bird down. This aspect needs to be explored.

Another aspect needing investigation is why *Typha* was selected from the other wetlands plants, or indeed, if it was singled out as most important. Can it be that people consider the cat-tail a special indicator of the nether world more important than the remaining wetland species? If so, why? Names of some other wetland plants among the Navajo appear to suggest that they considered *Typha* more important or elemental than others. For example, *Eleocharis montevidensis* Kunth is **teeł ts'ósí** (slender cattail), *E. palustris* (L.) Roem. & Schult., *E. rostellata* (Torr.) Torr. and *Scirpus acutus* Muhl. ex Bigelow are **teeł níyiz** (round cattail), and both *Iris missouriensis* Nutt. and *Triglochin maritima* L. are **teeł łikan** (sweet cat-tail) (Wyman & Harris 1941, Vestal 1952). All six of these plants are used in the Lightningway healing ceremony (Vestal 1952) which contends that the infirm person has been impacted by being near a lightening strike (Wyman & Kluckhorn 1938, Begay & Maryboy 2000). Clearly there are other views and factors needing elucidation.

At the time Theophrastus and Dioscorides were writing down the Greek names for cat-tails, some of these connections were unknown. When Linnaeus (1753) created the genus *Typha*, he might have been unaware of the many allusions the Greek words contained, but that appears unlikely. Subsequent to *Typha* naming in 1753, the knowledge of Greek and Latin myths was lost among most scholars in the disciplines of anthropology and botany. For example, in an otherwise excellent paper, Griffith (1990) speculated that the people of the Americas provided Europeans with their only source of beliefs in water monsters. Europeans imported a surfeit of dragon stories and the American views only augmented those beliefs. In an etymological sense, *Typha* is the offspring of multiple cultures.

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Appendix

Some common names applied to *Typha angustifolia* L., *T. domingensis* Pers., and *T. latifolia* L. These species are not always distinguished, but listed where they are. Language names are from Ethnologue (Gordon 2005), except for the Athapascan and O'odham languages. Athapascan names follow Nancy Turner (personal communication); O'odham follows Rea (1998), Felger & Broyles (2007), and other local sources.

Language Classification Family	Subfamily	Language	*Typha* Common Names and Comments	Country	Information Source
Afro-Asiatic	Semitic	Egyptian Spoken	**uth** (reed), **¡Arw**	Egypt	Budge 1920
		Arabic, Hadrami Spoken	**naṭaf**	Yemen	Ghazanfar 1994
		Arabic, Standard	**bardî <barda, bût>** طُوب**, hfafâ'**	Saudi Arabia	Ghazanfar 1994, Porcher 1995-2004
		Hebrew	**suf** οιη	Israel	Zohary 1982
Algic	Algonquian, Central	Chippewa	**apuk'we**	USA (Minnesota, Wisconsin); Canada (Ontario)	Densmore 1928
		Cree	**otawuskwa <huhutawask, ōtawaskwa, ā(h)towusk, watōtāhuk, wa-hu-tá-was-qa>** (water-edge plant), **pāsīhkan** (refers to flower spike), **wa**. Lacombe listed **wa** as a second full name of the plant.	Canada	Lacombe 1874, Marles *et al*. 2000
		Potawatomi	**pukyuk**	USA (Kansas, Michigan, Wisconsin)	Laughead 1997
	Algonquian, Eastern	Malecite-Passamaquoddy	**haw-kwee-usqu'**	USA (New Brunswick, Maine)	Leland 1884
		Micmac	**skŭnaaskw, skŭnow'** (plural **skŭnâk'**)	Canada (Nova Scotia)	Rand 1888
		Wampanoag	**wekinash**	USA (Massachusets)	Lexiteria 2004-2007
	Algonquian, Plains	Blackfoot	**aápáíai** (*T. latifolia*)	Canada (Alberta); USA (Montana)	Franz & Russell 1995
Altaic	Turkic	Turkish	**büyük su kam1sh1** (*T. latifolia*), **su kam1sh1**	Turkey	Porcher 1995-2004

Language Classification Family	Subfamily	Language	*Typha* Common Names and Comments	Country	Information Source
Arawakan	Maipuran	Arawak	**kala** (**kala**=*Typha*, cognate with Carib **kara**), **kalakalaru** <**kala-kalaroe**> (**kalaru**=reduplication plus –**ru**?)	Suriname	Klooster 2003
Australian	Pama-Nyungan?	language?	**cambungi**	Australia	Jessop 1981
Austro-Asiatic	Mon-Kmer	Vietnamese	**bồ** (**bồ**=prefix with many names of things from birds to flowers, and alone is what one calls their sweetheart), **bồn bồn** (alone **bồn**=tub or flower bed), **thuỷ hương** (**thuỷ**=water, **hương**=perfume, fragrance, incense)	Vietnam	Porcher 1995-2004
Austronesian	Malayo-Polynesian	Maori	**raupo**	New Zealand	Couper 1951
		Tagalog	**parayparay**	Philippines	Conklin 1962
Aymaran	--	Aymara	**zec-zec, umaocsa** (**uma**=water)	Bolivia	Keller 2001
Caddoan	Northern	Arikara	**híš**	USA (North Dakota)	AISRI 2007
		Pawnee	**awaáhawa** <**awaáhawa, hawahawa**>, **kiriktacarvs** <**kirit-tacharush**> (**kirit**=eye, **tacharush**=itch, so named because flying down causes itching of eyes)	USA (Oklahoma)	AISRI 2007, Austin 2004, Gilmore 1919
Carib	--	language?	**kara**	Suriname	Klooster 2003
Chibchan	Paya	Pech	**kwõŋ'kwãw²**	Honduras	Lentz 1993
Chimakuan	--	Quileute	**tšá-a-bukhl** (for roots)	USA (Washington)	Curtis 1907-1930
Chumash	--	Chumash	**taqsh (Barbareño, Ineseño), qap (Ventureño)**	USA (California)	Timbrook 1990
Creole	English based	Sranan	**ara, flaggra** (flag), **kunsuwiwiri** (**kunsu**=cushion, **wiwiri**=leaf), **langagrasi** (**langa**=long, **grasi**=grass)	Suriname	Klooster 2003, Outer 2001
Dravidian	South-Central	Telugu	**dabbujammu, emiga-junum, jambu, jammu, jammugaddi**	India	Parrotta 2001, Watt 1889
	Southern	Kannada	**anechondu** <**anejondu**>, **apu, maribala**	India	Parrotta 2001
		Malayalam	**attudharba, champu, payapullu, sabappullu**	India	Nayar *et al*. 2006
		Tamil	**sambu, pan, kampagkOrai**	India	Parrotta 2001

Language Classification Family	Subfamily	Language	*Typha* Common Names and Comments	Country	Information Source
Hokan	Esselen-Yuman	Cocopa	**xnyaɬy, cipiɬ** (general), **hanč pla.k** (young plant), **ʔakwír <akwıra>** (pollen)	USA (Arizona-California border)	Castetter & Bell 1951, Crawford 1989
		Kumiai	**ēn-pihl** (for roots)	Mexico; USA (Washington)	Curtis 1907-1930
	Esselen-Yuman	Maricopa	**at'api'l <at'ápi'l>**	USA (Arizona-California border)	Castetter & Bell 1951, Spier 1933
		Mohave, Yuma	**'atpily <atpil>**	USA (Arizona-California border)	Castetter & Bell 1951, Munro et al. 1992
		Walapai	**hamsi'ïva <hamsi'iv>** (no joints)	USA (Arizona)	Mekeel 1935, Watahomigie *et al.* 1982
	Northern	Pomo, Eastern (extinct)	**bi-lé-liśh**	USA (California)	Curtis 1907-1930
		Pomo, Northern (extinct)	**ka-ké**	USA (California)	Curtis 1907-1930
		Pomo, Southern	**hal**	USA (California)	Curtis 1907-1930
	Salinan-Seri	Seri	**pat**	Mexico (Baja California)	Felger & Moser 1985
	Washo	Washo	**toiba**	USA (California-Nevada border)	Murphey 1958
Indo-European	Celtic	Gaelic, Scottish	**cuigeal nam ban-sìdh** (**cuigeal**=mace, **nam**=of the, **ban**=women, **sìdh**=fairy) (*T. latifolia*)	Scotland	Scott 1995
	Germanic	Dutch	**beizen** (=**bijten** in Holland; corrode, cauterize, pickle), **grote lisdodde** (**grote**=big, **lisdodde**=*Typha*, based on **lis**=flag, **doddig**=sweet) (*T. latifolia*), **kleine lisdodde** (**kleine**=little). Compare this "sweet flag" with Cantonese.	Netherlands Suriname	Porcher 1995-2004 Outer 2001

Language Classification Family	Subfamily	Language	*Typha* Common Names and Comments	Country	Information Source
Indo-European	Germanic	English	bulrush (in use by ca. 1440, "bull" of uncertain origin; identified by some with "bole," as the trunk of a tree; by others supposed to be a use of "bull," male of any bovine animal, + "rush," used for grassy plants of Juncaceae, and similar families), cat-tail [cat-o'-nine tails, cat-tail flag] (by 1542, when Fuch's recorded the name as "cattis tayle," and "cats taile"; "flag," a wetland plant with a leaf like a blade, i.e., ensiform; origin obscure), elephant grass (a name shifted by returning World War soldiers from the *T. elephantina* to *T. domingensis*), reed-mace (as "reide mace," by 1542 or before; from the use by boys as toy war instruments)	Australia, England, USA Belize	Austin 2004, Vest 1948 Balick *et al*. 2000
		German	**breitblättriger Rohrkolben** (**breitblättriger**=broad-leaved, **Rohr**=tube, pipe, reed, **Kolben**=mace), **breiter Rohrkolben** (**breiter**=broad) (*T. latifolia*), **schmalblättriger Rohrkolben** (**schmalblättriger**=narrow-leaved, **Rohr**=tube, pipe, reed, **Kolben**=mace), **schmaler Rohrkolben** (**schmaler**=narrow). Technically, **Kolben** originally was the flower-cluster of *Acorus* or *Arum*.	Germany	Porcher 1995-2004
		Norwegian	**bred <bredt> dunkjevle, dunkjevle** (**bred**=broad, **dunkjevle**=*Typha*) (*T. latifolia*), **smalbladet dunkjevle <smal dunkjevle>** (**smal**=small, **bladet**=leaf)	Norway	Mossberg & Stenberg 1994
		Swedish	**bredkaveldun** (**bred**=broad, **kaveldun**=*Typha*) (*T. latifolia*), **smalkaveldum** (**smal**=small)	Sweden	Porcher 1995-2004
	Greek	Greek	**τύφη (tiphe), τυφης (tiphes)**	Greece	Theophrastus (372-287 BCE), Dioscorides (fl. AD 40-80)

Language Classification Family	Subfamily	Language	*Typha* Common Names and Comments	Country	Information Source
Indo-European	Indo-Iranian	Bengali	**hoglá, kaw**	Bangladesh	Parrotta 2001, Watt 1889
		Buksa	**patera** (*T. latifolia*)	India	Watt 1889
		Garhwali	**kanda-tella** (*T. latifolia*)	India	Watt 1889
		Gujarati	**ghabajario <ghabajarin>, panjabris, rámbána <ramban>, pario, jungl, bájrí** (*T. latifolia*). Compare with **janglibajri** in Marathi.	India	Parrotta 2001, Watt 1889
		Hindi	**patera <pater>**	India	Parrotta 2001, Watt 1889
		Kashmiri	**pitz <piz>** (historically *T. elephantina*), **yira**	India	Watt 1889
		Marathi	**eraka, janglibajri, motitrina, pankanis, pun, rámbána <rambana>**	India	Parrotta 2001, Watt 1889
		Nepalese	**khar, pater**	Nepal	Porcher 1995-2004
		Punjabi, Western	**boj, bok, dib <dab>, dile, gond, kai, kúndar <kundar>, lúkh, pan, pitz, patira <parira, patara>, bori** (this is probably the same as **boor** and **booree**, a bread made from the pollen; **bora** refers to *T. elephantina*), **yira**.	Pakistan	Hedrick 1919, Parrotta 2001, Watt 1889
		Sanskrit	**eraka, gundra** (for *T. elephantina*), **zara** (to rend or destroy), **zibi <zivi>, zRGgavera** (having a root like that of ginger, also the name of a serpent-demon)	India	India: Malten 2003, Monier-Williams 1899, Parrotta 2001
		Sindhi	**mudo-pun, pun**	Pakistan	Watt 1889
	Italic	French	**canne** (cane, reed), **chandelle** (candel), **jonc de la passion** (reed of the crucifixion), **massette à feuilles étroites** (narrow-leaved mace), **massette à grosses feuilles [massette à larges feuilles]** (big-leaved mace), **massette des étangs** (pond mace), **queue de rat** (rat's tail), **quenouilles** (club, distaff, mace), **roseau des étangs** (pond reed) (*T. latifolia*)	France	Keller 2001, Porcher 1995-2004

Language Classification Family	Subfamily	Language	*Typha* Common Names and Comments	Country	Information Source
Indo-European	Italic	Italian	**bastone acquatico** (water mace), **candela** (candle), **lisca a foglie larghe** (**lisca**=fish-bone, **foglie**=leaf, **larghe**=big), **lisca maggiore** (big fish-bone), **mazza d'acqua [sorda]** (water [deaf] mace), **pannia** (**panni**=cloth pieces, **panno**, singular, from resemblance of fruit cluster to material used to make jackets and pants), **papea maggiore** (big **papea**=?), **sala grande** (great room), **sordoni** (deaf), **schianze** (variant of **stiancia**=?, a word of Tuscan origin), **stiancia d'acqua** (water stiancia), **tifa** (see text for discussion) (*T. latifolia*); **lisca a foglie strette** (**lisca**=fish-bone, **a foglio strette**=narrow-leaf), **mazza sorda** (**mazza**, mace, **sorda**=big hollow thing, from **sordone**), **stiancia minore** (little ?), **tifa a foglie strette** (cattail with narrow leaves, see text for etymology of **tifa**)	Italy	Keller 2001, Porcher 1995-2004
		Latin	*typha*	Italy	Linnaeus 1753
		Portuguese	**espadana** (spike), **landim, murrão dos fogueteiros** (blister of the fire-makers), **partasana** (from Italian **partigiana**, French **pertuisane**, halberd; the halberd was a weapon of the 1400s and 1500s made of an ax and pike mounted on a long handle. **Partasana** apparently alludes to a similarity between the weapon and leaves), **tabua-estreita** (narrow *Typha*; **tabua <taboa, tapu>** is from **tápua**=top, the toy, ultimately derived from Latin **bŭda**=?), **tabua larga** (large *Typha*, as the toy top) (*T. latifolia*)	Brazil Portugal	Le Cointe 1947, Mors *et al.* 2000 Porcher 1995-2004
		Romanian	**papură lată** (**papură**=*Typha*, **lată**=broad, wide)	Romania	uBio 2004
		Sardinian	**tifa** (see text for etymology)	Sardenia	Rubatt 2006

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Indo-European	Italic	Spanish	**anea <aceña, enea>** (copper-colored; probably originally from Arabic **nay(a)**, cane, flute), **bobordo, cola de gato** (cat's tail), **cola de topo** (mole's tail), **espadaña estrecha (espadaña**=spike; derived from Latin *spadix*, applied to *Typha* by 1400, **estrecha**=narrow), **espadona** (spiked), **espadaina** (little spike), **espadaña ancha [común]** (narrow spike [common]), **espadaxa** (presumably a local variant of **espadaña**), **gladiola** (gladiolus, presumably because of similarity with *Gladiolus* leaves), **junco** (*Juncus*, from similarity of leaves), **junco de estera** (mat reed), **junco de pasíon** (crucifixion reed), **macío** (mace), **macio de hoja estrecha** (narrow-leaved mace), **maza de agua** (water mace), **tule** (=*Typha*) (*T. domingensis*), **tule espadilla (tule**=reed, from Náhuatl **tollin** or **tullin**, **espadilla**=little sword), **vela de sabana** (savanna candle), **zacate ignea (zacate**=grass, based on Náhuatl **zacatl**, **ignea**=fire; an allusion to using the fruit heads as torches)	Spain USA (Texas) Belize Mexico Columbia	Corominas 1954-1957, Porcher 1995-2004 Correll and Correll 1972 Balick *et al.* 2000. Martínez 1979, White 2003 Duke 1972
	Slavic	Czech	**orobincem sirolistym <orobinec širolistý>** (*T. latifolia*), **orobincem uzkolistym <orobinec úzkolistý>**	Czech Republic	Porcher 1995-2004
		Polish	**pałkowate (pałko**=?, **wate**=water)	Poland	Wikipedia 2007
		Russian	**рогоз грациозный <rogoz gratsioznyi>** (**рогоз**=*Typha*, **грациозный**=graceful, gentle), **рогоз широколистный <rogoz shirokolistnyi>** (**широколистный**=broad-leaved) (*T. latifolia*), **рогоз узколистный <rogoz uzkolistnyi>** (**узколистный**=narrow-leaved)	Russia	Porcher 1995-2004
Iroquoian	Northern Iroquoian	Onandaga	**oonatoo'kwa <oo-na-too'kwa>** (many rushes growing high)	USA (New York)	Beauchamp 1902

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Iroquoian	Northern Iroquoian	Tuscarora	**unaʔkwe•yaʔ** [based on **–naʔkwey**]	Canada (Ontario)	Rudes 1999
	Southern Iroquoian	Cherokee	**astislusgi** <**a-s-ti-s-lu-s-gi**> (fire maker)	USA (North Carolina)	Manataka Indian Council 2007
Japanese	--	Japanese	ガマ **gama** (*T. latifolia*), ヒメガマ **hime gama** (**hime**=little). Porcher gives the name ネムロコウホネ **nemurokou hone**, but that is *Nuphar pumilum*	Japan	Porcher 1995-2004, Walker 1976
Kiowa Tanoan	Tewa-Tiwa	Tewa	**‘awa, ‘awase** (*T. domingensis*?), **‘awap’a** <**‘aguap’a, aguapá**> (**‘awa**=*Typha*, **p’a**=large) (*T. latifolia*). This has been loaned into local Spanish as **aguapé**	USA (New Mexico)	Curtin 1947, Robbins *et al*. 1916
Macro-Ge	Chiquito	Chiquitano	**tunaz**	Bolivia	Keller 2001
Mascoian	--	Lengua	**akho**	Paraguay	Arenas & Scarpa 2003
Mataco-Guaicuru	Mataco	Maca	**fapu’**	Paraguay	Arenas & Scarpa 2003
		Nivaclé	**wana’yuk, wa’na**	Paraguay	Arenas & Scarpa 2003
		Pilagá	**chi’na**	Argentina	Arenas & Scarpa 2003
		Toba	**chii’na** <**chiená, chie#na, cheená**>, **na/á/** <**na’ate**>	Argentina	Arenas & Scarpa 2003
		Wichí Lhamtés Güisnay	**jwi’na** <**jwi’na#**>	Argentina	Arenas & Scarpa 2003
Mayan	Cholan-Tzeltalan	Tzotzil	**puj**	Mexico	Mora-Morín 2003
	Heiroglyphic	Maya	**pu[j]**	Guatemala	Boot 2002, Mathews & Bíró 2006
	Huastecan	Huastec, San Luís Potosí	**etsol ha’** (**ha’**=water, **etsol**=*Brahea dulcis*, a palm)	Mexico (San Luis Potosí, Veracruz)	Alcorn 1984
	Quichean-Mamean	K’iche’	**aj, tul** (loan word from Náhuatl **tollin**)	Guatemala	Christensen 2003
	Yucatecan	Maya, Yucatán	**puh** <**pu(h), pu(j)**>, **ya’ax ha’** (**ya’ax**=green, **ha’**=water), **su’uk** (grass)	Mexico	Anderson *et al*. 2003, Bolles 1997, Curtin 1947
Muskogean	Eastern	Mikasuki	**pashini** <**pasí:ni**>	USA (Florida)	Austin 2004
		Muskogee [Creek]	**pashinat**	USA (Florida)	Austin 2004

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Muskogean	Western	Chickasaw	**hoski, kowi' hasimbish** (**kowi'**=cat, panther, bobcat, **hasimbish**=tail), **panti'** (meaning both *Typha* and, as **Panti'**, a mythical animal with beautiful teeth that were traded for a child's discarded teeth)	USA (Oklahoma)	Munro & Willmond 1994
		Choctaw	**panti**	USA (Alabama)	Read 1938
Na-Dene	Nuclear Na-Dene	Apache, Western	**teeɬ**	USA (Arizona)	Bray 1998
		Apache (which group?)	**k'ĭětlmilakahŏn'ai <k'i-ĕtl-mi-la-ka-hŏn'-a-i>** (the plant), **hadidíin <hoddentin, hadentin, hadntin, kat-ûn-tĭn>** (cat-tail powder, i.e., pollen)	USA (Arizona, New Mexico)	Bourke 1891, Linskens & Jorde 1997, Russell 1898
		Carrier (Stuart/ Trembleur Lake)	**tl'orazilh**	Canada (British Columbia)	Turner pers. comm. 2007
		Chilcotin (=Tzilcotin)	**tl'etíl, <tl'edach'ox>**	Canada (British Columbia)	Turner pers. comm. 2007
		Chipewayan	**tih'ogh k'a** (grass fat, refers to shoots), **tlh'ochoḵ'aghe, kálächuzé <kélachuze>** (refers to fluffy seed spikes), **e-ka-lánṭli** (fat like)	Canada	Marles *et al.* 2000
		Dakelh (not in Gordon 2005)	**tl'oghazilh** (big, sharp grass)	Canada (British Columbia)	Turner pers. comm. 2007
		Kato	**kˊólkˀǫs-bɑŋ <kolk'osbang, koolk'oosbang>**	USA (California)	Lexiteria 2004-2007
		Navajo	**teeɬ <te•l, tq̃ëɬ> nitsaaígíí (teeɬ=**cattail, **nitsaaígíí**=broad, for *T. domingensis*), **tádidíin <txatitjį', tqa-di-tin', ta-di-tin', tadiṭį>** (pollen; sometimes *Typha* called **teeɬ bitádidíin <tyeɬ bitádiṭį>** and *Zea* is **tádidíin <tadiṭį>**)	USA (New Mexico)	Bourke 1892, Elmore 1944, Matthews 1888, Mayes & Lacy 1989, Wyman 1936a, Wyman & Harris 1941
		Sekani	**dagi t'ǒ**	Canada (British Columbia)	Turner pers. comm. 2007
		Slavey, South	**nathĩtahtlhoh**	Canada	Marles *et al.* 2000
		Ulkatcho (=Chilcotin fide Gordon 2005)	**telh, tl'odazoolh**	Canada (British Columbia)	Turner pers. comm. 2007

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Niger-Congo	Atlantic-Congo	Fulfulde	**toloo-re** <je>	Nigeria	Blench 2003
Nilo-Saharan	Eastern Sudanic	Turkana	**ekamate** (refers to hollow stem)	Kenya	Morgan 1981
Oto-Manguean	Zapotecan	Zapotec	**beecho <peecho>** (mat, matting, or bundle of reeds), **colabecho [cola pecho**=mat], **cola-yaquema (yaquema**=*Typha*?)	Mexico (Oaxaca)	Austin 2004, Martínez 1979
Penutian	California Penutian	Proto-Wintun	***patpat**	USA (California)	Callaghan 2001
		Wintu [Hill Patwin] (nearly extinct)	**pa•tpat**	USA (California)	Callaghan 2001
		Maiduan	Maidu, Northwest [Konkaw]	**pok-poko**	USA (California)	Callaghan 2001
	Oregon Penutian	Takelma	**duyùm**	USA (Oregon)	Sapir 1907
	Plateau Penutian	Klamath	**pó-pas** (root), **wi-hwi** (tip of fruit stalk)	USA (Oregon)	Curtis 1907-1930
	Yok-Utian	Miwok, Lake	**pápat** (probably a loan-word from Hill Patwin)	USA (California)	Callaghan 2001
		Proto-Valley Yokuts	***pumuk'**	USA (California)	Callaghan 2001
		Valley Yokuts (extinct)	**poton**	USA (California)	Callaghan 2001
		"Wp"=Proto-Wintu?	**ṕocák**	USA (California)	Callaghan 2001
		Yokuts	**patak**	USA (California)	Callaghan 2001
		Ohlone, Southern	**haale** (Mutsun dialect), **xaal** (Rumsen dialect)	USA (California)	Bocek 1984
Quechuan	Quechua II	Quechua	**totora**. Also applied to *Schoenoplectus*.	Peru	Arenas & Scarpa 2003, Castilhos de Araujo Cypriano 2000
		Quechua?	**matára**	Peru	Keller 2001
Salishan	Central Salish	Clallam	**skūm-skûm** (for roots)	USA (Washington)	Curtis 1907-1930
		Comox	**qā'aqa'** (cat-tail mat)	Canada	Turner & Bell 1971
		Halkomelem	**sc'ɛ'ʔqən** (Cowichan dialect; **sá'lɛc**, cat-tail mat)	Canada	Turner & Bell 1971
		Salish	**sc'e'qən** (Sooke-Songish dialect), **st'θe'ʔqən** (Saanich dialect), **st'wən** (cat-tail mat)	Canada	Turner & Bell 1971

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Salishan	Central Salish	Lillooet (=Stl'atl'imx)	**k'ámkw'7-az' <k'ám'kw'7-az'>** (fruiting heads: **k'ámkw'a7**, or **k'ám'kw'a7**)	Canada (British Columbia)	Turner pers. comm. 2007
		Shuswap (Secwepemc)	**kwtéllp** (W), **kwtállp** (E)	Canada (British Columbia)	Turner pers. comm. 2007
		Twana (extinct)	**hūb-hūb** (for roots)	USA (Washington)	Curtis 1907-1930
	Tsamosan	Quinault	**wit-śhi** (for roots)	USA (Washington)	Curtis 1907-1930
Sino-Tibetan	Chinese	Chinese, Mandarin	蒲 (*Typha*), 宽叶香蒲 **kuan ye xiang pu** (**kuan**=broad, **ye**=leaf, **xiang**=fragrant, **pu**=*Typha*) (*T. latifolia*), 水燭 **shui zhu** (**shui**=water, **zhu**=candle). Mats of leaves are 蒲團 **pú tuán**.	China	Porcher 1995-2004
		Chinese, Yue [Cantonese]	宽叶香蒲 **fun jip hoeng pou** (**fun**=broad, **jip**=leaf, **hoeng**=fragrant, **pou**=Typha) (*T. latifolia*), 香蒲 **hoeng pou** (**hoeng**=fragrant, sweet, **pou**=*Typha*), 水燭 **seoi zuk** (**seoi**=water, **zuk**=candle, for *T. orientalis*)	China (Taiwan)	Peng 2000, Porcher 1995-2004, Yung & Yao 1985
	Tibeto-Burman	Rawat	**bora**	Nepal	Watt 1889
Siouan	Siouan Proper	Assiniboine	**hįtktą, wihúda <hu-hú-da>** (**wihúda**=bottom of tipi)	USA (Montana); Canada (Saskatchewan)	AISRI 2007
		Dakota	**hįtktą hu** (**hįtktą**=*Typha*, **hu**=plant), **wihuta-hu** (**wihuta**=bottom of tipi, **hu**=plant; compare with Omaha below)	USA (Northern Nebraska, southern Minnesota, North and South Dakota, northeastern Montana)	AISRI 2007, Austin 2004, Gilmore 1919
		Ho-Chunk	**ksho-hin** (**ksho**=prairie chicken, *Tampanuchus cupido*, **hin**=feather, plucked down resembles finer feathers from the prairie chicken)	USA (Nebraska, Wiscosin)	Austin 2004, Gilmore 1919

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Siouan	Siouan Proper	Omaha-Ponca	**wahab' igaskonthe [wahaba gaskondhe]** (**wahaba**=corn, **igaskonthe**=similar, referring to the appearance of the floral spikes synchronously with maturing of corn), **wihuta hu** (**wihuta**=bottom of tent, **hu**, plant stem, referring to their use as a "skirt" on the bottom of the tipi during hot weather)	USA (Nebraska, Oklahoma)	Austin 2004, Gilmore 1909, 1919
Tupi	Tupi-Guarani	Guaraní	**calpempe**	Paraguay	Keller 2001
Uralic	Finnic	Finnish	**kapeaosmankäämi** (**kapea**=narrow, **osman**=name of a man or place in genitive case, **käämi**=baton, mace), **leveäosmankäämi** (**leveä**=wide) (*T. latifolia*)	Finland	Porcher 1995-2004
Uralic	Finno-Ugric	Hungarian	**gyékény**	Hungary	Palyka pers. comm. 2007
Uto-Aztecan	Northern Uto-Aztecan, Hopi	Hopi	**wí•pho <wipho>**	USA (Arizona)	Albert & Shaul 1985, Voegelin 1956, Whiting 1939
	Northern Uto-Aztecan, Numic	"Plateau Shoshonean"	**tá-i-vi**	USA	Curtis 1907-1930
		Paiute, Northern	**tabu'oo, to'-ĭmp**	USA (Utah, Arizona, and Nevada)	Chamberlain 1911, Murphy 1958
		Paiute, Southern	**tɔ'ɔis**	USA (Utah, Arizona)	Sapir 1930
		Panamint	**to'i(pi)**	USA (California, Nevada)	Dayley 1989
		Shoshoni	**to'imp**	USA (Utah)	Chamberlin 1911
	Northern Uto-Aztecan, Takic	Cahuilla	**ku'ut**	USA (California)	Bean & Saubel 1972
	Northern Uto-Aztecan, Tubatulabal	Tubatulabal	**to:ibï:l**	USA (California)	Vogelin 1938

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Uto-Aztecan	Southern Uto-Aztecan, Aztecan	Náhuatl	**tollin** <**tullin**>, **tolpatlacti** (**tollin**=*Typha*, **palactli**=long) (*T. latifolia*), **hueizacat** (**uei**=large, **çacatl**=herb, cattail), **petalzimicua**. (**petalatl**=mats, **cimicua**=plant prepared in stews). **Tolpetlac** (**tollin**=*Typha*, **petalatl**=mats) was a locality where the Aztecs stopped before arriving in **Tepeyacac** (nose-shaped mountain).	Mexico	Austin 2004, Hodgson 2001, Martínez 1979, Siméon 1885
		Náhuatl-Spanish	**tule balsa** (**tule**, from Náhuatl **tollin**, **balsa** in Spanish compares the crafts with *Ochromas*, a famous light wood, Bombacaceae, used for making them)	Costa Rica	Pittier 1957
	Southern Uto-Aztecan, Cahita	Mayo	**tule** (Spanish or cognate with Náhuatl?)	Mexico (Sonora)	Yetman & Van Devender 2002
	Southern Uto-Aztecan, Tepiman	Akimel O'odham	**uḍvak** <**oodvak**>	USA (Arizona)	Curtin 1949, Rea 1997
		Hia C'ed O'odham	**'uḍuvhag**	USA (Arizona)	Felger & Broyles 2007
		Tohono O'odham	**uḍuwhag** <**'uduvaḍ**>	USA (Arizona)	Nabhan 1983, Shaul 2007
Wakashan	Northern	Kwakiutl	**kwelíˀems [kwelí7ems]** (the plant), **kwelíŷi** (mats)	Canada (British Columbia)	Turner & Bell 1973
Yuki	--	Wappo (extinct)	**hé-me-tšaí-ma** (? elbow)	USA (California)	Curtis 1907-1930
		Yuki (extinct)	**sõn**	USA (California)	Curtin 1957
Language family?	--	language?	**ñisñil** (*T. latifolia*)	Mexico	White 2003