

## Ethno-veterinary Practices Among the Konda Reddi of East Godavari District of Andhra Pradesh

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**ABSTRACT** The paper deals with the ethnography of community based indigenous knowledge and methods of caring for, healing and managing livestock by the Konda Reddi, one of the Primitive Tribal Groups (PTG) in the state of Andhra Pradesh. The paper includes Konda Reddi classification of common livestock ailments, their diagnosis and treatment by the local medicine man, the vejju. It also underlines that reasons for the continuation of herbal treatment and chanting (mantra) therapy among the Reddis, despite the availability of modern medical facilities for the livestock in the tribal areas.

### PREAMBLE

The study of ethno-veterinary practices is a growing area of inter-disciplinary research having immense potential to understanding various nuances of folk knowledge on domesticated animals. More and more natural and social scientists, veterinary practitioners, livestock owners and field workers in developing countries are becoming interested in medicinal plants and their therapeutic uses in caring for the livestock. A simplistic definition of ethno-veterinary medicine is that it is the community-based local or indigenous knowledge and methods of caring for, healing and managing livestock. This also includes social practices and the ways in which livestock are incorporated into farming systems. Ethno-veterinary medicine consists of local peoples' knowledge dealing with folk beliefs, skills, methods and practices pertaining to animal health care and production. This knowledge is based on close observation of animals and/or the oral transmission of experience from one generation to the next (Mathias-Mundy and McCorkle, 1989). The term, "Ethno-veterinary", was coined by McCorkle in 1986. It recognizes the cultural context of traditional practices of livestock management and marks the beginning of systematic exploration of local practices for the development of livestock population. This rich repository of local knowledge about almost all aspects of livestock care is inherent in most of the rural and tribal communities, although it is or well nourished among the pastoral nomads all over the world.

Ethno-veterinary medicine has emerged as a challenging field in more recent times that promises to benefit rural and peri-urban stock raisers, not just in the developing countries, but everywhere by virtue of the "generation or regeneration" of certain animal health technologies (Mathias-Mundy and McCorkle, 1989). The present article is intended to contribute to this growing body of knowledge by documenting selected information on the etiology of animal diseases and plant based ethno-veterinary curative techniques found among the Konda Reddi of East Godavari District in Andhra Pradesh.

### DISTRICT PROFILE

East Godavari District is located in Andhra Pradesh in the southern part of India and situated in the eastern bank of the river Godavari with an area of 10807.74 sq km. The District is situated between 6°30' and 18°N latitude and 81°30' and 82°36' E longitude. It is bound in the north by Visakhapatnam District and the State of Orissa, in the east and the south by the Bay of Bengal, and in the west by Khammam and West Godavari Districts. It can be broadly divided into three distinct geographical zones viz, the Agency or the hilly tracts, the upland, and the delta. The Eastern Ghats rise by graduation from the level of the seacoast and spread throughout the Agency tract. The coastal belt is rich with highly fertile deltaic soil, giving it the reputation of being the rice granary of the country. The upland area, though less fertile, supports varieties of dry land

and rain fed agriculture. Most of the Agency area is, however, hilly and covered with dense forest. The District comprises of 57 Mandals, out of which 7 Mandals are within the Agency tracts. The annual rainfall in East Godavari District may be anywhere from 1140 to 1900 mm. and the temperature ranges from 43° C in summer to 10° C in the winter. Parts of the District are covered by dry deciduous southern tropical forest resulting in subtropical to temperate areas, alternating with evergreen forests of the Eastern Ghats. The region is extremely rich in vegetation and is covered with different types of soils with varied climatic conditions. Hence, it bears a variety of forests with different species and composition. Essentially all are tropical forests identified into various ecological formations. According to the forest working plan, area of forest in the District is 3,197 sq.km, constituting 29.58% of state forestland. There are two main types of vegetation in the District depending on the climate and the altitude. On the plains one can see mainly climbers, shrubs, and succulents. Three types of the forests cover the hill and the mountains of the East Godavari District: dry deciduous, moist deciduous and dry savannah. The forests in the District preserve a wide variety of floral and faunal life, which are the sources of life for dozens of tribal communities living within the forest areas. Konda Reddis, mostly inhabiting these Agency tracts of the District, have considerable knowledge on uses of plants and animals for their livelihood, health care and other purposes due to their close proximity with the forest. They have gathered an intimate knowledge of the applicability of various local flora and fauna, which are of immense medical use. Most characteristically, they always scrupulously guard this knowledge from the aliens with the belief that this knowledge loses its worth, if disclosed to others.

#### KONDA REDDIS AND THEIR HABITAT

The Konda Reddi habitat is characterized by hilly tracks and cleared forest areas of the Eastern Ghats. They are concentrated in the District of East Godavari, Khammam and West Godavari, and found scattered in the Districts of Warangal and Visakhapatnam of Andhra Pradesh. Other Scheduled Tribes living in symbiosis with Konda Reddis in East Godavari District are Konda Kammaras, Koyas and Valmikis. The co-existence of multiple tribal groups in the area has given rise

to a broad cultural mosaic with a social, linguistic, occupational and cultural diversity. Konda Reddis speak a dialect of Telugu unlike other tribes in the Eastern Ghats. Konda Reddis occupy more remote and mountainous areas and are characterized by small close-knit communities. Most of them live in multi-ethnic villages, where there is very little social stratification. Their economy is still largely subsistence oriented and production is for self-consumption rather than for the market.

Their method of agriculture is known as *podu* (slash and burn or swidden cultivation), which is supplemented by hunting, gathering and fishing. The technology is still simpler, as swiddening does not need any sophisticated technological input. In villages with plain land, the Reddis practice non-irrigated settled agriculture. The major crops raised by Konda Reddis are paddy (*vari*), *Zea mays* (*mokka jonna*), tubers (*dumpalu*), millets like *Panicum miliare* (*samalu*), *Setaria italica* (*korralu*), *Eleusine coracana* (*sode*), *Guizotia sp.* (*adusulu*); pulses like red gram (*kandulu*), green gram (*pesaru*); vegetables like Brinjal (*vangalu*); chillies (*pachimirapa*); etc.

Konda Reddis are primarily animists. They worship many deities, which are considered superior to nature, for obtaining their blessings for a peaceful and comfortable life, and for a bumper harvest. Every activity begins only after the worship and celebrating a festival of the concerned deity. Important among these festivals are *mamidi pandaga* (mango harvest festival), *bhudevi pandaga* (for the Goddess of earth), *gangamma pandaga* and *vanadevudu pandaga* or *kappa pandaga* (for rain), *adavi rajula pandaga* (for the forest gods), etc. During these festivals, animal sacrifices are common. Ancestor worship is a major component of the Reddi religion. All the dead, irrespective of their age and sex, are considered as ancestral spirits and are worshiped by the members of the respective lineages. Reddis firmly believe that planetary ill effects and witchcraft cause diseases and death. Whenever a person falls ill a physician or a magician is summoned, the reason for the illness is elicited, and remedial measures are taken (Fürer-Haimendorf, C. and Fürer-Haimendorf, E., 1945).

#### Dependence on the Forest

Even though Konda Reddis are agriculturists, their dependence on the forest is almost absolute (Misra 1998). Forest is still the veritable

storehouse of food for them and they depend entirely upon the forest for its produce throughout the year. The Konda Reddi calendar is marked by various seasons for various edible fruits, tubers, nuts, green leaves, and even for hunting games. Except for a few months during and after harvest, Konda Reddi women and children are engaged in collection of edible forest produce for subsistence and minor forest produce for sale to Girijan Co-operative Corporation (GCC). According to many in the community, each plant species has its own value.

### **Anthropological Studies on Ethno-veterinary Practices**

Ethno-veterinary medicine or veterinary anthropology is the study of the folk beliefs, knowledge, skills, methods, and practices about animal health care (Mathias-Mundy E. and McCorkle, 1989). One of such systematic studies presents various aspects of ethno-veterinary practices of the pastoralists, mainly the camel men, in northeastern Sudan. It lays emphasis on social and personal profiles of traditional healers, their sources of knowledge, inputs utilized, mode of payment for rendered services, types, frequencies and procedures of surgical interventions performed by the healers, etc. It also furnishes information on the plants and their parts commonly used in physiotherapy treatments and other ailments. The study includes the herders' knowledge and practices regarding vaccination, general disease control, supplementation and special feeding, etiology and disease theory, and diseases terminology, etc. (Abbas, 1997). A similar study in the northeast province of Cameroon among the Fulani pastoralists discusses the natural and supernatural diseases (Toyang et al., 1995). Among the outstanding researches in India, mention may be made of the study in Kerala. This study among the members of the Malabar Regional Co-operative Milk Produces Union in Kerala shows that 70% of livestock farmers use traditional knowledge and therapies in caring for their animals. Foot and mouth diseases, mastitis, fever, bloat, diarrhoea, and helminthiasis are the common diseases treated. The plants customarily used for ethno-veterinary treatment are pepper, ginger, turmeric, garlic, and preparations made from neem and tamarind (Padmakumar, 1998). In the rural areas of Dindigul District in Tamilnadu also, the pastoral communities keep alive their traditional veterinary practices based on the

curative power of plants and plant extracts (Rajan and Sethuraman, 1997). In many Mediterranean countries honey is used on wounds of the livestock for fast healing. The mode of action is believed to be partly achieved through an osmotic effect, which draws fluid from the wound. This fluid serves to 'flush out' dirt and other contaminants and thus promotes healing (Porth, 1994). Old engine oil containing sulphur is widely used in Africa as a treatment for various skin diseases (Mathias-Mundy and McCorkle, 1989). Wood ash rubbed into animals' coats is commonly used by pastoralists to repel insects, potentially carrying the infect-making bacteria (ibid). In Ethiopia goat keepers boil the leaves of the castor oil plant (*Ricinus communis*) to provide a liquid, which is used to control mange in the goats. The active agent, *Ricinus*, is very poisonous and provides an example of an ethno-veterinary management agent that must be handled with care (Peacock, 1996). There are many plants which have some anathematic effect and justify continued investigation, such as *Artemisia maritime*, *Caesalpinia crista*, *Melia azedarach*, *Mallotus philippensis*, *Chrysanthemum* species, *Matteuccia orientalis*, *Carica papaya*, *Heracleum species*, *Hedysarum coronarium*, *Aloe barteri*, *Terminalia anicennioides* and *Diospyeos mollis* (Hammond et al. 1997).

### **Ethno-Veterinary Practices Among the Konda Reddi**

Various types of livestock play a major role in the agriculture-based economy of the Konda Reddi in East Godavari District. Oxen (*yeddu*), cows (*aavulu*), calves (*dudalu*), bulls (*dunnapothulu*), goats (*mekalu*), sheep (*gorrelu*), buffaloes (*gedelu*), poultry (*kodlu*) and dogs (*kukkalu*) are usually domesticated by Reddis. Those who have cattle have to deal with various health problems among their animals. The most common animal diseases are given below. Some of these ailments are treated by the people themselves, although the medicinemen are expected to possess expert knowledge of the diseases and their cure. Since the government veterinary dispensaries are usually far away from the tribal hamlets, people have to rely on traditional veterinary practices as a first line of treatment. The traditional knowledge of plant based remedies for the treatment of animals rests with the medicinemen. The medicineman collects the plants needed for a particular veterinary

application, either directly from the forest or from the weekly markets (*shandy*). The low cost and easy availability of the ingredients encourage the farmers to try ethno-medicine first. The tribal healers involved in ethno-veterinary practices are said to be remarkably professional, enjoying an excellent reputation among the farmers in their locality.

Many of the diseases treated with traditional remedies are husbandry related ailments such as contagious ecthyma (*notigadlu* or *muthipundlu*) or mouth diseases, foot rot (*kadlagadlu*), enterotoxemia type of diseases (*chitukuvyadi*), blue tongue (*nilinaluka*), smallpox (*ammoru*), ephemeral fever (*kurma*), tuberculosis (*shakyarogam*), trypanosomiasis (*jomma*), pneumonia (*domma*), haemorrhagic septicemia (*kantivapu*), black quarter (*yerrachippi*), rinderpest (*musaravadi*), etc. These diseases are treated by plant based therapeutic knowledge of the tribals. However, they acknowledge that the effectiveness of the treatment depends on the stage and severity of the disease.

#### **Konda Reddi Classification of Livestock Diseases**

Reddis classify the diseases on the basis of many principles. Diseases affecting individual parts of the body are named according to the parts that the disease affects. These include mouth disease, foot rot, cold (*jalabu*), cough (*daggu*); sneezing (*tummudu*), etc. On the basis of durability, Reddis classify diseases into two types: those with lesser duration (*mamulu jabbulu*) and diseases of longer duration (*pedda jabbulu*). For example, diseases of lesser duration for them are commonly occurring diseases like contagious ecthyma or mouth disease, foot rot, cold, cough, sneezing, while the diseases of longer duration include enterotoxemia, blue tongue, smallpox, ephemeral fever, tuberculosis, trypanosomiasis, pneumonia, haemorrhagic septicemia, black quarter, rinderpest, etc. According to the Reddis some diseases are specific to different species. For example, the cows suffer from smallpox, tuberculosis, trypanosomiasis, haemorrhagic septicemia, rinderpest, and ephemeral fever. Oxen suffer from pneumonia, haemorrhagic septicemia, black quarter, ephemeral fever, swelling of shoulder, etc. Goat and sheep suffer from enterotoxemia type of diseases, blue tongue, pneumonia, and the like. Buffalos suffer

from blue tongue, smallpox, etc. Poultry suffer from hole in the heart (*kokkeri tegalu*), smallpox. Dogs suffer from the diseases like losing hair (*bokkade*). The diseases like mouth disease, foot rot, cold, cough, sneezing, skin diseases (*gajji*) are common for all the livestock. According to Reddis, some diseases are gender specific. For example, cows, she goats, she buffalos are attacked by bleeding from the breast (*yerrasappi*). The oxen suffer from a disease called swelling of shoulder (*bhujampongadam*). Reddis classify the diseases also as seasonal and non-seasonal. In rainy season, the following diseases occur: the mouth diseases, foot diseases or foot rot, cold, cough, sneezing, pneumonia or anthrax, haemorrhagic septicemia, etc. In winter season, the animals suffer from ephemeral fever and skin diseases. In summer season the animals suffer from black quarter, sunstroke (*vadadebba*), rotten boil (*puchinapandu*), fever (*pedakajomma*), etc.

#### **Diseases, Their Symptoms and Treatment**

The medicine man, which treats the animal diseases among the Konda Reddis is commonly addressed as *vydudu*. The *vydulu* are commonly males, although females are not forbidden to take up this practice. In fact, most of the women among the Reddis have the basic minimum knowledge of the animal diseases and their plant based treatment. Given below are some of the common diseases, their symptoms and treatment by the Reddis.

*Mouth Disease (Pokkulu)*: This disease attacks the animals when they eat newly raised grass on the ground in the month of June (*tholakari*). The symptom of the disease is that the animal gets boils inside and outside the mouth. The boils appear on the tongue also. These boils look red and froth comes out of the animal's mouth. Sometimes blood might come out from the wounds caused by the boils. Outside the mouth, boils are visible in the corners of the lips. Due to this the animal cannot eat fodder properly and it becomes weak. Another symptom of this disease is that the stomach swells, the animal becomes weak, and is not in a position to move from one place to another. The medicine man treats this disease by taking rock salt (*uppu*), *endimira-pakayalu* or dry chilly (*Capsicum annum*) and *chinthapandu* (*Tamarindus indica*), mixes them together, puts the mixture into the mouth, and

rubs the tongue with finger nails for sometime. This is continued for 3-4 days once every day. Alternately, an iron rod is heated for some time and put on the neck of the animal for a few seconds, which is believed to automatically cure this disease. During the period of treatment, the animal is given black gram or *minappapu* (*Phaseolus mungo*) mixed with rice. Another medicine, which is considered effective for this disease is the mixture of the bark of *maredi chettu* (*Aegle marmelos*) and the raw turmeric (*pasupu*) pods. The grounded mixture is applied on the tongue till the animal gets cured. One more treatment for the disease is by the mixture of the bark (*chekka*) of *gummudu* (*Cisscus visticlinnae*), *dhittupu veru* (a wild root), soil of the hearth and *kunda kanduru* soil (soil made by an insect called *kunda kanduru*). The mixture is ground smoothly and applied on the affected parts of the animal for curing the disease.

**Foot Rot (Kallagadlu)** : This disease attacks the cattle, when the animals walk in water, mud, through wet places, etc. Symptom of the disease is that the animal cannot walk properly. Treatment of the disease is done by the bark of *musidi* (*Strychnos vomica*), *odise*, and a wild tuber (*Bheemudusallu dumpa*). All the three ingredients are ground properly, made into a paste, mixed with mud or clay, and the animal is allowed to walk in that clay for about half an hour. Alternative medicine for this disease is the bark of *nemalimanu* (*Calosanthos indica*) collected from the east side of the tree, made into pieces and tied to the wounds in the foot. The bark absorbs the bacteria from the wounds and cures the disease.

**Ephemeral Fever (Kurma / Nallamabbu)**: The visible symptoms of the disease are that the animal starts shivering and becomes weak and unable to walk. The animal limps (*kunti*) on only three legs. If there is delay in curing this disease, it extends to foot rot. To cure this the Reddis take *chintha akulu* (*Tamarindus indica*) leaves, boil them properly, make paste and apply on the body to reduce pains in the joints of the cattle and also to reduce shivering of the animal.

**Bleeding Blood from the Mammary Glands (Yerra sappi or Chituku vyadi)**: Cows, she-goats and other female animals are affected by this disease. In case of attack, blood comes out from the breast of the animal. The animal is not able to eat properly and not able to walk. When the calf drinks milk, the animal falls down, blood comes

from the breast and the animal cannot breathe properly. The urine of the animal is slightly turned into red. To treat this disease the medicine man takes the bark of *badidemanu* from the east side of the tree, *udike* bark (a wild tuber) *kaaki borra dumpa*, root of wild tendril *errabenu teega* (*Ventilago maderaspatana*), wet *pacha pasupu* (*Curcuma longa*), mixes all of them and grinds them smoothly to make paste. The paste in water is given to the diseased animal once in a day till the disease is cured.

**Cough (Daggu)**: This disease makes the animal to cough continuously due to the climate change or by grazing newly raised grass on the ground. To treat this disease the medicine man takes out water from the *korinta teega* (*Pterolobium hexapetalum*), mixes with gruel and gives it to the affected animal. *Korinta teega* is a wild tendril found in the forest, which looks white from the out side and red from inside with small leaves.

**Hole in the Heart (Kokkeri tegalu)**: This disease exclusively affects the poultry. Symptoms of the disease are that the suffering bird is not able to walk properly and becomes weak and looks drowsy all the time. It sleeps at any time anywhere and froth usually comes out from the mouth of the affected bird. Treatment of the disease is simple by giving liquor (*saara*) to the poultry.

**Haemorrhagic Septicemia (Kanti puvvu)**: This disease attacks the sides of the eyes and tip of the tail in the form of boils with the clotting of blood. If the disease attacks the eyes, the eyeballs become red and gradually the animal becomes blind. The disease is treated by taking out the juice from the fruit, *nalla chidi* (*Semecarpus anacardium*), and applying it on the effected parts. Alternatively, Reddis take the leaves of a wild tuber called *kakaborra dumpa*, extract the juice, (*akupasara*), mix with ghee (*neeeye*) and rub the mixture on the effected parts to get relieved from the disease.

**Releasing Sperm (Paradum)**: the main symptom of the disease is that the cows release sperms immediately after mating. The tribals treat the disease by grinding the bark of *somichettu* (*Swietenia febrifuga*) for extracting the juice, which is mixed with water and given to the animal once in a day till the disease is cured.

**Rinderpest (Tella sappi or Neturu purru)** : Reddis believe that this disease attacks the livestock, when their blood becomes impure. The disease is manifested by the appearance of boils

on the body and by swelling of the body at places. Because of this, the animal finds it difficult to stand and run here and there. To treat this disease the Reddis operate the boils with a knife in order to take out the impure blood. To cure the wound, they take the fruits of chinthachettu (*Tamarindus indica*), boil them for some time, peel off them and apply on the wound, which helps in curing the wound.

**Castration (Budda kotadam)** : Castration of oxen is done locally in the village when the calf is of the age of three years. For this, they tie the leg of the animal and make it to lie on the ground. Then they hit the scrotum of the animal with a stone called *budda rai*. Because of this hitting the balls go inside and become small. To relieve from pain and to prevent infection, Reddis apply *pasapu* (*Curcuma longa*) powder and *nalla chidi* (*Semecarpus anacardium*) fruit juice to the scrotal sac after hitting with the stone.

**Loss of Hair (Bokkede)** : This disease is exclusively found in the dogs and the symptoms of the disease is loss of hair from the body along with boils all over the body. It is believed to be spreading from the bushes around. The treatment of the disease is simply by sprinkling or rubbing salt water on the body for 4-5 days. If immediate treatment is not given, the disease is believed to be fatal.

**Small Pox (Ammoru /Gangamma)** : This disease is mostly found among the poultry and appears in the rainy and winter seasons, lasting for about 10-12 days. When affected, the birds get small boils all over their body. Due to this disease the poultry become white and blind and get *kodi pendlu /gommari* on the body, which are invisible. The Reddis treat the disease in the following manner: they take sweet oil and ghee mixture and boil for some time. The mixture is then cooled and applied on the body twice for three days. Alternatively, they take cow ghee and mix with some turmeric powder and rub on the body and face till the bird is cured. Otherwise, they take the bark of *raichettu* (*Ficus religiosa*), boil it properly, take out the juice, and apply on the poultry.

Besides the treatment of these and many other animal diseases by herbal medicine, Konda Reddis depend upon the *mantra* therapy by the medicine man for the following diseases:

**Trypanosomiasis (Jomma)**: This disease attacks the cattle and other animals. The prime symptom of the disease is that the animal suddenly

falls down on the ground, shivers for some time, and then gets up. Reddis believe that this disease (*neela jomma*) is caused either due to drinking of contaminated water by the animal or it affects the calves from the mother cows (*pala jomma*) through milk. The popular treatment of the disease is by the medicine man, who takes out his loincloth (*angamola*) locally called *ghochi* and hits it 2-3 times on the face of the animal by chanting mantras with out looking at the face of the animal. At the time of wearing his loincloth, the medicine man changes the side of the cloth and wears from the other side. Reddis say that this disease is only treated with chanting and not by any herbal medicine.

**Fits (Morsa)**: This disease attacks any animal, including the cows, goats, oxen, buffaloes etc. The common symptom of the disease is that the affected animal immediately falls on the ground and is not able to get up with froth coming out from the mouth and legs start shaking. The medicine man treats this disease by taking the slipper of *madiga*, which is made of the animal skin and hitting it on the face 2-3 times with the chanting of mantras. This disease, the Reddis believe has no herbal medicine.

### Reasons for Preferring Traditional Therapies

Many Reddis say that they use traditional medicine not only because it does not have any side effects, but also available freely from the nearby forest or in the vicinity of the village. Moreover, herbal medicine is culturally appropriate and easily recognized by the tribals themselves unlike the western medicines. Since the government veterinary hospitals are usually far away from the village and it is difficult to carry the sick animals to the hospitals, they find it easier to consult the local medicine man for diagnosis and treatment of the animal diseases. If the animals (usually the cows) have any trouble at the time or delivery then only they go to the veterinary hospitals. Another very strong reason for not consulting a veterinary surgeon is the general satisfaction with the performance of the local healers, who prove to be quite efficient in offering treatment.

### Ethno-medicine in Modern Context

In recent times, many local NGOs, like Girijana Deepika and others, working in East Godavari District of Andhra Pradesh, have ventured into

the popularization of herbal medicines for animals in the tribal villages. The volunteers first learn the knowledge of ethno-medicine from the tribal medicine man, then identify the medicinal plants, prepare medicines with the help of the local medicine men, and treat the tribal livestock on a token payment. There is also an attempt to train the tribal youth in ethno-veterinary practices by giving them all facilities for transmission of this dying practice. Sometimes, ethno-veterinary practices are recorded for wider circulation. Since the concepts of alternate medicine and plural medical practices are gradually being recognized and getting government patronage, it is imperative to examine the pharmacological import of these medicines and encourage the ethnic healers to standardize their knowledge and make a living out of it.

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