Identification of Poisonous and Non poisonous Snakes

Poisonous snake Cobra Pit viper (Russlli)

and Non poisonous Snakes





TO STUDY MODIFICATIONS IN BEAK AND FEET OF BIRDA

BEAKS

Tearing and Piercing Fruit Eating Beak Mud PROBING Beak Fish Catching Beak Wood Chiseling Beak Flower Probing Beak

FEET

Perching Feet Raptorial Feet Climbing Feet Swimming Feet Cursorial or Running Feet

Tearing and Piercing Beak:

The carnivorous birds which feed on carrion and flesh. Therefore they have short, pointed, sharp edged, powerful hooked beaks for tearing flesh. This type of beak is operated by well developed mandibular muscles. Eagle, vulture, Owls, Kites, Hawks are the examples of this type of beaks.

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Vulture

Eagle

Owl

Fruit Eating Beak

Many birds feed on fruits hence their beaks are sharp, powerful and hooked. This type of beak can break hard fruits, nuts and hard seeds. In case of parrot, beak is very sharp, massive and deeply hooked and strong. It is useful for breaking open hard seeds and nuts. The beak of the hornbill is very large and heavy. But it is very lights, its interior structure is cellular.





Parrot

Hornbill

Mud Probing Beak

There are several birds which collect their food from the mud. Their beaks are extremely long and slender and slightly curved. These beaks are used as probes for thrusting in the mud for searching the food like aquatic worms, insects and larvae. Muds probing type beaks are found in stilts, sandpipers, jacanas and lapwings.



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Fish Catching Beak

Fish catching beaks are pointed spearing beaks to capture fish, frogs, tadpoles and similar aquatic animals.





Wood-Chiseling beak

Woodpeckers have elongated, straight and stout beak for drilling into the barks or wood for insect larvae or for nest construction. They have thickened, shock-absorbent, skull bones and strong neck muscles.



Flower Probing Bird

Beaks are long pointed and rapier like probing beak of tropical humming bird. It is used for sucking food material from flowers. Their beaks are bent or so shaped so as to suit the particular shape of flowers.



Humming Bird

Perching Feet

Majority of the birds show perching type of feet. In this type three toes are directed forward and they are slender. While one toe or hallux is posterior which is strongly opposable so that they can securely fasten the foot to a branch or a berch. The feet possesses long and powerful ankle bones, digits and sharp, oval and curved claws.





Jungle Crow

Sparrow

Raptorial Feet

This feet are occur in carnivorus, predatory birds like Kite, eagle, owls etc. these birds bear such type of feet for striking and grasping their prey. The toes are armed with strong, sharp and curved claws. All the four toes are present the hallux is strongly developed. The toes shows presence of large and fleshy bulbs called tylari.





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Climbing feet

The feet are used as grasping organs and especially adapted for climbing vertical surfaces. Second and third toes point in front, while first and fourth toes point backwards.



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Parrot: Climbing and Clinging





By Manoj Kumar, Department of Zoology, SXC, Ranchi.

Swimming Feet

In swimming birds, toes are webbed partially or completely. The feet are modified as propellers or steering organs. In case of diving birds the web is lobate and toes are free. In swimming and paddling birds only anterior, three toes are united by web whereas in Pelican and Cormorant all the four toes are united by web.



Cursorial Feet or Running Feet

These feet are found in birds adapted for running. Ostrich is the best example of cursorial feet. In this bird, the legs are very strong and powerful and number of toes are reduced. The hind toe is elevated, reduced or absent. In case of Bustard, Emu, Rhea and Cassowary only three toes are present and they are directed forward. Ostrich has only 2 toes of which the outer one is smaller and without a nail.

Ostrich: Cursorial or Running





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