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JOGULAMBA GADWAL DIST.

Affiliated to Palamuru University, Mahabubnagar

DEPARTMENT OF ZOOLOGY



STUDENT STUDY PROJECT
ON
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నైటిలియం (సిరెంటులూ)

బయ్యారూపకత: - సహస్రి వౌక జీవులలో వివిధ జీవకముల విర్పడి బాశకళ జీవకము ఒక ఉత్పాదక తీయను నిర్వర్తించును. ఇట్లు జీవకములు అనాక రూపములలో అగుపడుతున్న "బయ్యారూపకత" అంటారు.

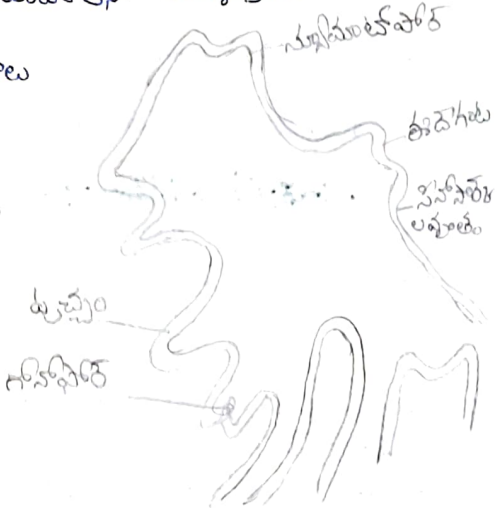
బయ్య కృ జీవులలో వివిధ వ్యాపారాలు నిర్వర్తించడానికి ఎట్లయితే వివిధ వ్యవస్థలుంటాయో అదే విధంగా సిరెంటులూ వర్షంలోని బాశకళ జీవిలో ఎన్నో జీవకాలు వివిధ రూపాలలో ఉండి అనాక వ్యాపారాలను నిర్వహిస్తాయి. అందువలన చినికి బయ్యారూపకత అంటారు.

నైటిలియం జీవుల బయ్యారూపకత:

- 1) బయ్యారూపకత ఉత్పాదక ప్రాణిపాతా జీవులలో అధికముగా అగుపడును. వాటి సహస్రి వౌకలో కెడు రకములైన జీవకములున్న ఎడల ద్వీరూపకత అని, మూడు రకాలైన జీవకములున్న వాటి అరుంకత అని అందురు.
- 2) వక కృ జీవులలో జీవకములన్నింటిని బాశ కళగా నిర్వర్తిస్తుంది. బయ్య కృ జీవులలో "తమ విభజన" అనబడి ఒక ముఖ్య లక్షణం. తమ విభజన ఉండేటం వల్ల జీవకములను చురగా, సులవుగా నిర్వర్తిస్తాయి.
- 3) కెంతు సామాజ్యంలో వ్యాటి హెటెరోథిస్ వర్షం మొదలుకొని స్కాకాదుకాల వరకు జావిలో ఉండే వివిధ అంగాలు వివిధ చర్మలను వరస్పర సహాయంతో సమస్థయ ఉత్పాదకత్తిలో నిర్వర్తిస్తాయి.
- 4) బయ్యారూపకతను చిక్కిం చానె జీవులలో గల వివిధ రూపాలను "జీవకాలు" అంటారు. ఈ కారణం వల్ల సిరెంటులూ ద్వీరూపకతను ఉదాహరిస్తుంది.

5) సాధారణంగా ఈ జీవులలోని ముఖ్య జీవకాలు పాలిప్, మెడ్యూసెల. ఈ జీవకాలా అధిక ఉత్పాదకతను సంతరించుకోవడం వల్ల వివిధ జీవకాలు విర్పడి బయ్యారూపకతకు దారితీస్తాయి.

6) పాలిప్, మెడ్యూసెల కెడు కూడో బాదాని త్రావిత మకాకటి విర్పడి చిటి త చరిత్రను పూర్తి చేస్తాయి.



7) అలైంగింట్ ఉత్పత్తిలోని హాలింట్ సుంచి మొదటిసారి రూపం ఏర్పడును.
ఇది బియ్యం రూపం కల మోటుగా ఉంటుంది.

8) మైండ్రిజోవా విభాగంలో సైఫోనోఫోర క్రమానికి చెందిన మైసెలియం, హాలెస్టోమూర్, ఫోస్ఫోటా లో బియ్యం రూపం కల స్పష్టంగా గమనించవచ్చు.

ఈ క్రమం హాలింట్ మొదటిసారి కింది వెరానూ మార్పుల కలిపిస్తాయి.

మూర్త్యు చెందిన హాలింట్ దశలు:-

1) **జీవకములు:-** విటెసి వోషియా జీవకములు ఈ క్రమంలో మొదటి లాంటివి అందురు. ఈ జీవకములు వోషియా కిందికి నిర్వహించును. ఇది స్థూపాకారంగా ఉండి, నోరు, జీవక కుండలములను కలిగియుంటుంది.

2) హాలింట్ ఆధారభాగం సుంది శాఖారాముగా ఒకే ఒక స్ఫుర్తకము ఏర్పడును. ఇది శాఖలుగా విడిచిపోతుంది. బియ్యంను బంధకములు అందుకుంటున్న వలన ఆహార సేకరణలో తీరుతుంది.

2. **అంకుళ్ళని జీవకములు:-** ఈ జీవకములను రుచి జీవకములు ఈ స్థూలజీవకములు అని కూడా అందురు. ఈ జీవకములు రక్షక జీవకములు.

1) జీవక జీవకములు మూర్త్యు చెంది నోరు అద్భుతమగుట వలన ఈ జీవకములు ఏర్పడిన

2) అంకుళ్ళని జీవకముల కలిగియున్న వాడుగా ఉంటుంది. బంధకములతో కూడిన వాడుకైన స్ఫుర్తకము కలదు.

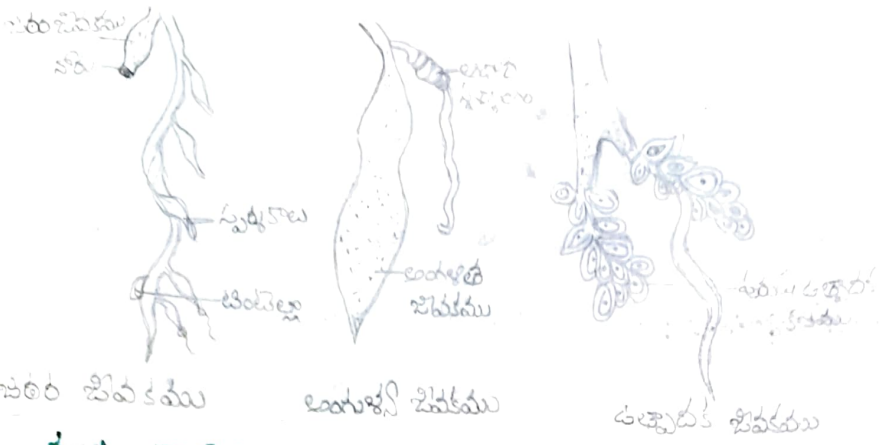
3) విసర్జన క్రియకు ఉపయోగపడు అంకుళ్ళని జీవకములను "సిస్టెమ్" అని అందురు. నోనోఫోరులతో సంబంధము కలిగియున్న అంకుళ్ళని జీవకములను "నోనోఫోర్మల" అని అందురు. అంకుళ్ళని జీవకములు ఆహారమును పట్టుకొని జీవకములకు అందుతుంది.

3. అలైంగింట్ జీవకములు:- 1) ఇవి ఉత్పత్తిలో జీవకములు.

2) ఇవి మైసెలియం ల వలె గాని, జీవక జీవకముల వలె గాని ఉంటుంది. ఇవి మూర్త్యు చెందిన హాలింట్ దశలు.

3) హాలింట్ దశల సుంది మొదటిసారి ఉన్న దశలుగాని మొదటిసారి అందుకుంటున్న దానిని ఏర్పడును.

4) ఈ జీవకములకు నోరుగాని స్ఫుర్తకములుగాని ఏర్పడివు. జీవక కుండలం క్రిందికి ఉంటుంది.



బెర్రర బెవకము

అంబుళి బెవకము

అంబుళి బెవకము

మొదట చెందిన మొదటసాదకలు

1) నెట్టికొత్తలు :-

వీటిని నెట్టికొత్తలు అక ఈదా గంటలు అంటారు.

- 1) ఈ మొదటసాలు గంట ఆకారములో ఉండి పట్టిస్తరమును కలిగియుంటును.
- 2) నాలుగు కిరణ కుళ్ళులు, వలయ కుళ్ళులు కూడా ఉంటువు. నాసి నోరు, ర్షివాయకము, శ్లైస కణములు స్పర్శకము లుండవు.
- 3) ఈ బెవకముల బెర్రరము కంఠరయులేపై ఉండి త్తదుకు ఉపయోగపడును.

2) బాక్సల తదా హైడ్రోఫిల్లలు :-

వీటి కర్రము ఆకుమొదటిగా ఏర్పడి

మొదటైన శ్లైశ్రవవద్దాములో ఉండును. కాని హెల్మెట్ ఆకారంలా ఉండును.

- 1) ఈ బెవకములు మొదటా దక మంచి ఏర్పడినవైనప్పటికి మొదటా దకను వాటి ఉండవు.
- 2) ఈ బెవకములలో బెర్రరకుహారము సరళముగా నాసి శాఖాయమై నాసి ఉండును.
- 3) సాధారణంగా ఇవి బెర్రర బెవకములను కప్పుచు రక్షణను కలుగజేయును.

3) న్యూమోటాఫోరులు :-

సహని వొకము నీటిలో తొలియుండుటకు

ఉపయోగపడును.

- 1) ఇవి సంచుల వలె ఉండి, గాలిలో నిండి ఉండును. వీటి కర్రము తలచిందుగా ఉన్న మొదటా వలె ఉండును. నోరు, స్పర్శకములు ఉండవు. శ్లైశ్రవస్థరం కూడా ఉంటుంది. గండు వాగులు మూత్రమై ఉండును.
- 2) ఉపరి భాగం తలాని న్యూమోటాఫోరు అని, ఉపభాగం తలు కుడానినీ న్యూమోటాఫోరు అని వాడుతుంటారు.

- 4) సాధారణంగా వాయు ఆక్సిజన్ బాహ్య ఆక్సీకరణము ఉపరితల విధిని క్షేత్రీయ వాతావరణ ఆవరించబడి ఉంటుంది.
- 5) కేంద్ర ఖాళీ వాయు ఆక్సిజన్ ఆక్సిజన్ అను పేరులతో ఒక నిత్యంగాను విచ్ఛిన్నం చేసి కొంతకాలము యొక్క బాహ్య వాతావరణము (అధికంగా) మురియుచుండును.
- 6) వాయు ఆక్సిజన్ ఆక్సిజను, నైట్రోజను, ఆర్గాన్ మొదలగు వాయువులు ఉంటాయి.

4) గానీ ఫోటోలు :- ఇవి ఉత్పాదక మెడు సామర్థ్యం చేపడతాయి.

- 1) ఇవి బుట్టరిగా గాని, సమాహారములుగా గాని ఉన్న బహుళజాతి జీవీకరణములు. వీటి యందు పట్టికరణము, కరణ కుల్యలు గానోయకము మొదలగునవి ఉంటాయి. కాని వారు, స్పృశకములు, జ్ఞానావయవములు ఉంటాయి.
- 2) గానోయకము లు జీవజ్యోతిములు అమరి ఉంటాయి.
- 3) సహజ వాతావరణము ఉత్పాదక మైక్రోజీవీకరణము, పురుష గానీ ఫోటోలు భిన్నముగా ఉంటాయి.
- 4) గానీ ఫోటోలు మెడు సామర్థ్యము, పురుష గానీ ఫోటోలు ఆక్సీకరణము చేయుచు విచ్ఛిన్నం చేయును.
- 5) ప్లాంట్ జీవాలలో అధిక జీవులలో గానీ ఫోటోలు, వృంత రహితమై ఉంటాయి.

చిహ్నరూపకత విచ్ఛిన్న విధానము :-

చిహ్నరూపకతలో వివిధ జీవములు వివిధ రకాలను నిర్ణయించుచు చూచుచుండు చిహ్న విచ్ఛిన్నం అత్యధిక స్థాయిలో కలదు. చిహ్నరూపకత ఆవిష్కరణములకు అనేక నిర్ణయకరణములు కలవు.

1) బహు అంశ నిర్ణయకము :- హాక్సెల్, మెటెన్షియాన్ అను శాస్త్రవేత్తలు ఒక చిహ్నరూపకాన్ని బట్టి ఒక మెడుకు రూపాంతరము అభివృద్ధి పట్టారు. మెడుకు రూపాంతర నిర్ణయకము. చిత్రం బహుళ తలలైన చెంది వాటి యాభివృద్ధి స్థాయిల గురించి వలస పాటు వివిధ రకాలను విచ్ఛిన్నం చేయుచుండును. చిహ్న బహు అంశ నిర్ణయకం అంటారు.

- 1) సైఫోనోపాకరు చెందిన జీవములు ఈ విధంగానే చిహ్నరూపకతను పొందుతాయి. ఈ కారణం వలన సైఫోనోపాకరు జీవులు తమ వివిధ జీవాల రూపాలను వివిధ రకాల నుండి విచ్ఛిన్నం చేసి శుభ్రం చేయుచు ఒక మెడుకును వారి ఉంటాయి.

3) మెడూసా ఈ సిస్టాంట్లను బలమందుచేసానికి ఉపయోగించిన, కాసి అవలు ఉండటం వల్ల ఇతరులు అమోదించలేదు.

4) పోలిస్, మెడూసా దళలు ఈ జిటి మొగ్గ అడ్డుకుట వలన విచ్ఛేదనని భావన.

2) బిషుల జీవ సిద్ధాంతము :- ఈ సిస్టాంట్లమును పాస్ట్, లాకార్ట్,

గెనెర్వర్ మొదలగు వారు ఉపసహించినారు. ఒక యువకుడైన సహానితోకము అనెక. బిషులచే విచ్ఛేదన. కాని ఈ బిషులను ఒక దానితో ఒకటి కలపబడి యుండును.

2) ఈ బిషులచే క్రూరముయిన కాసి భాగములు కలిపేవుట గాని, క్లియరుట గాని సంభవించవచ్చు. ఇది సోజుగా ఉడుతూ నివసించా సహానితోకాలు. పోలిస్ అత్యంత అభివృద్ధి చెందిన పాతివలంబాయి.

3) ఈ పాతివల వాని ఎదిగిన తర్వాత మెడూసా లను ఉత్పత్తి సామాన్యని పొందుతారు.

3) మెడూసా సిస్టాంట్లము :- ఈ సిస్టాంట్లమును హెకట, సెప్టిమెక్,

బాల ఫోర్ శాస్త్రవేత్తలు ఉపసహించిరి. దివి ఉకారుము సహానితోకము యొక ప్రాథమిక జీవకము మెడూసాను విచ్ఛేదన. దివి సుందీత్యైతి మొగ్గలు వాయుట వలన ఉత్త మెడూసాలు విచ్ఛేదన. ఈ మెడూసాలు ఉత్త జీవకములగు మారును. అంగుళియ జీవకములు మెడూసా యొక అవయవములు మార్పు చెందుట వలన విచ్ఛేదన.

యువకుడైన కత్తు అన్ని ఉదాహరణలు :-

A) హాత్రిస్ట్రామా :- దివి కేళరములచే వాటికైన కాదు మతి భాగమును

జీవకముల అంటుకాని నాటిపు తోలుచుండును. ప్లాంట్లములచే నాటితో నిండిన

నిమోత ఫోరు అనుజీవకము కలదు. దివికి దిగువన గుంటాకారములగు మన్న

నెక్టికెట్రెసెస్ జీవకములు అనౌకములుండును. వాటికి ఉడు గుంటలుండును.

ఈ జీవకములు నాటిని అగిలెటి గ్రహించి వెంటనే అయింతుకు వ్యయచుండును.

అలా చాయుట వలన జీవి చలించును.

చేసే యొకర అందుల వద్ద పుష్కలములవలె తీరు అంశుభి జీవకములు
 ఉండవు. వీటికి అతక దంత కణములుండవు. మృతకాట్ ఫారు, రుతువారంద
 భాగము. మెదుసా యొక రూపాంతరములు మిశ్రితర జీవకములు వ్రాత్వ
 రూపాంతరములు.

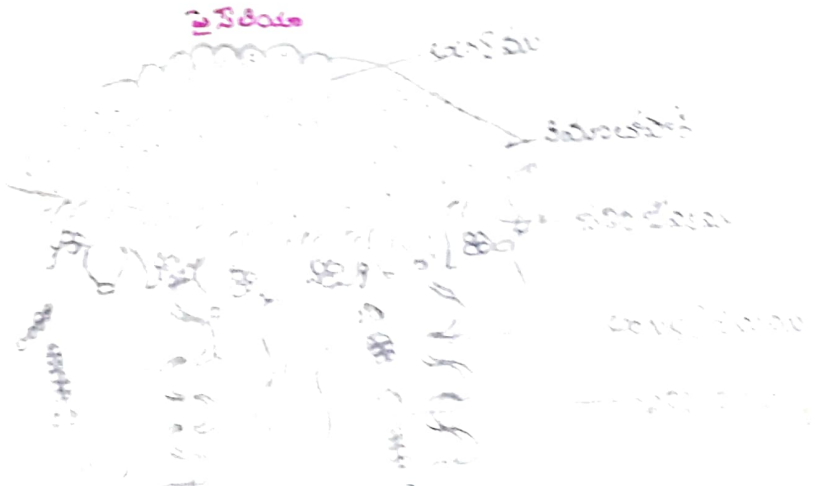


పై నెలయం

0) పై నెలయం :- ఈ జీవక విశిష్టతగానే మూర ఆఫ్ నార అంటారు.

మృతకాట్ సెక్రేషన్ ఈ జీవక నితరంలలో ఉండదు. మృతకాట్ ముఖ్య
 గాత్రం నెలకొంటుంది. ఒక మెదుసా మృతకాట్ ఫారు విస్తరించు. అతక మెదుసా
 వంటి జీవకముల కలవాకవల్ల ఈ రుతువార ఫారు విస్తరించే భావన
 రుతువార ఫారు ఆయి వ్రాత్వం సహజావకము యొక జీవకములు అయి
 ఉండవు. వీటిలో అంశుభి జీవకములు ఉత్పాదక జీవకములు, చిర
 జీవకములు ఉండవు. - అంశుభి జీవకములు పాడివ్రాగా నాళాంతరము
 ఉంది పాడివ్రాక స్పృశకములు కలిసి ఉంటుంది.

చిర జీవకములు కూడా నాళాంతరంలో ఉండి వైశిష్ట్యతలవలన
 నోటికి, పాడివ్రాక స్పృశకములు కలిసి ఉండవు. ఉత్పాదక జీవకములు
 నాళాంతరంలో లవలయించును. ఇవి అతక శాఖలకి విస్తరి ఉండవు.



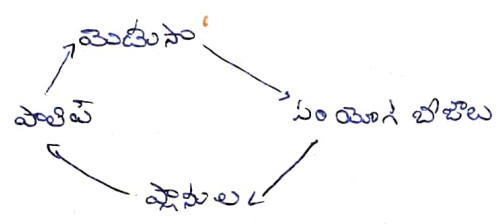
బహురూపత వికాసతరాలు: - బహురూపత సహాని వాక జీవిత. చరిత్రలని సంగ్రహించి ఒకటైంది. వికాస తరం బహురూపత ఎన్నో జీవాలని ఏర్పరుస్తాయి. ఒక విధంగా చూస్తే బహురూపకర్మం నుంచి వికాసతరం తొలు మొటా జెనెసిస్ ఉద్భవించినదని చెప్పవచ్చు.

2) కాని వికాసతరం నుంచి బహురూపత ఏర్పడవచ్చు అనికూడీ వాడుక వివి ఎంత తరకు సమంజసమే అలెయదు. నిద్రయాలని ఎ విధాలైన జీవిత చరిత్రల కన్పిస్తాయి. వాటి వలన శిశువుల వికీర్ణితులు ఏర్పడతాయి.

3) ప్రాణా ముఖ వికరూప జీవులని పాలిప్ నుంచి ఖండారర్పణ ఫాల్జెటగా తయారవుతాయి. కాని ద్వీరూపి ఖుని అకాలయూ; వాటి జీవులని పాలిప్ నుంచి అభింగికంగా మెడుసా ఏర్పడతాయి.

4) మెడుసాలు విడిచిన లైట్, పురుష బొబాబ సంయోగాల వలన షాన్సుల దింబం ఏర్పడి ఎదిగిన తర్వాత పాలిప్ గా మారుతుంది.

5) ఆదూపిత జీవులని జీవర బాహుల నుండి పాలిప్ ఏర్పడతాయి. పాలిప్ రూపాలని ఉన్న ఉల్పాదక జీవకాల నుంచి మెడ్రీసా ఏర్పడుతాయి.



- వికాస తరాలు అనావి సిలెంటుకాలా జీవులని తప్పని సరిగా కనిపిస్తాయి. చినిలిగి బొబా బొబిత చరిత్రలని అభింగిక పాలిప్ తరం, త్రింగిక మెడుసా తరాలు వికాస తరం నా జరుగుతాయి. చినిగి "మొటా జెనెసిస్" అంటారు.

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DEPARTMENT OF ZOOLOGY



STUDENT STUDY PROJECT
ON
COLLECTING OF ENDANGERED SPECIES
AY:2017-18
II YEAR B.Sc BZC

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Collecting of Endangered Species



Bengal Tiger

Scientific classification.

Kingdom	: Animalia
Phylum	: chordata
class	: Mammalia.
Order	: Carnivora.
Family	: felidae
Genus	: Panthera
Species	: P. tigris
Subspecies	: P. t. tigris.

Trinomial name: Panthera tigris tigris.

locality for the binomen *Panthera tigris*, to which the British taxonomist "Reginald Innes Pocock" subordinated the Bengal tiger in 1929 under the trinomen *Panthera tigris tigris*. The Bengal, Caspian and Siberian Tigers and Lion rank among the "Biggest cats".

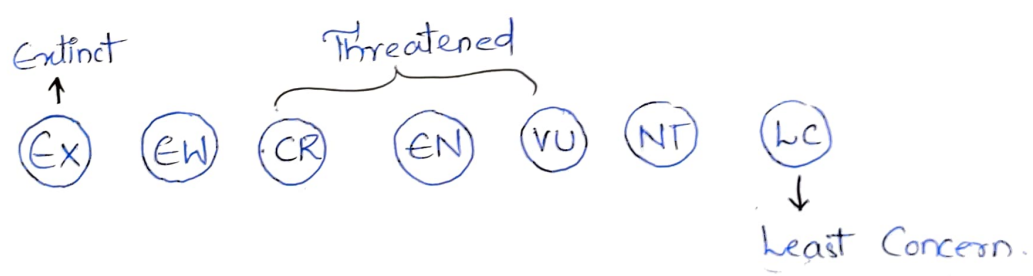
"It is the national animal of both India & Bangladesh."



A Bengal tigress in the Ranthambhore Tiger Reserve.

Bengal Tiger.

Conservation status:



Endangered (IUCN 3.1)^[1]



Brown Bear

Classification:-
Kingdom : Animalia
Phylum : Chordata
Class : Mammalia
Order : Carnivora
Suborder : Caniformia
Infraorder : Arctoidea
Family : Ursidae
G. Fischer de
Waldheim 1817

Subfamilies
* Amphicyoninae
* Hemicyoninae
* Ursinae
* Ailuropinae

Bear :-

Bears are carnivorous mammals of Ursidae. Bears are classified as caniforms, or doglike carnivores. Although only eight species of bears are extant, they are widespread, appearing in a wide variety of habitats throughout the Northern Hemisphere and partially in the Southern Hemisphere. Bears are found on the continents of North America, South America, Europe, and Asia.

Characteristics :-

Common characteristics of modern bears include large bodies with stocky legs, long snouts, small rounded ears, shaggy hair, plantigrade paws with five nonretractile claws, and short tails.

While the polar bear is mostly carnivorous, and the giant panda feeds almost entirely on bamboo, the remaining six species are omnivorous with varied diets. With the exception of courting individuals and mothers with their young, bears are typically solitary animals. They may be diurnal or nocturnal and have an excellent sense of smell.

Despite their heavy build and known awkward gait, they are adept swimmers, climbers, and species

and swimmers. Bears use shelters, such as caves and logs, as their dens; most species occupy their dens during the winter for a long period of hibernation up to 100 days.



Brown bear

Bears have been hunted since prehistoric times for their meat and fur; they have been used for bear-baiting and other forms of entertainment, such as being made to dance. With their powerful physical presence they play a prominent role in the arts, mythology, and other cultural aspects of various human societies. In modern times bears have come under pressure through encroachment on their habitats and illegal trade in bear parts, including the Asian bile bear market. The IUCN lists six bear species as vulnerable or endangered and even least concern species, such as the brown bear and at risk of extirpation in certain countries.

Etymology:-

The English word bear comes from old English beara and belongs to a family of names for the bear in Germanic Languages, such as Swedish bjorn, also used as a first name. that originate from an adjective meaning "brown"

• Bear taxon names such as Ursidae and Ursus come from Latin Ursus. Bear taxon names such as Arctoidea and Helaictos come from the ancient Greek word ἀρκτος (arktos), meaning bear, as do the names "arctic" and "antarctic" from the constellation, Ursa Major, the Great Bear prominent in the northern sky.

Bear taxon names such as Ursidae and Ursus come from Latin Ursus / ursa, he-bear / she-bear. The female first name Ursula originally derived from a christian saint's name, means "little she bear". In Switzerland the male first name "Urs" is especially popular. The Germanic name Bernard means "bear-brave" bear-hardy" or "bold bear". The old English name Beowulf is a kenning "bee-wolf", for bear, in turn meaning a brave warrior

Evolution and phylogeny:-

The family Ursidae is one of nine families in the suborder Caniformia, or dog-like carnivores. With the order Carnivora: Bears closest living relatives are the pinnipeds, canids and musteloids. Nuclear chromosome analysis show that the karyotype of the six ursine bears is nearly identical, with each having 74 chromosomes. whereas the giant panda has 42 chromosomes and the spectacled bear 52.

=: Snow leopard :=



Snow leopard

=: classification :=

kingdom	: Animalia
phylum	: chordata
class	: mammalia
order	: carnivora
Family	: Felidae
Genus	: panthera
species	: p. uncia

Binomial name :=
panthera uncia

development, the giant panda has been driven out of the lowland areas where it once lived.

The giant panda is a conservation-reliant vulnerable species. A 2007 report showed 239 pandas living in captivity inside

China and another 24 outside the country.

As of December 2014, 49 giant pandas lived in captivity outside China, living in 18 zoos in 13 different countries.

Wild population estimates vary. One estimate shows that there are about 1,590 individuals living in the wild, while a 2006 study via DNA analysis estimated that this figure could be as high as 2,000 to 3,000. Some reports also show that the number of giant pandas in the

wild is on the rise. In March 2015, Mongabay stated that the wild giant panda population had increased by 268, or 16.8%, to 1,864 individuals.

In 2016, the IUCN reclassified the species from endangered to vulnerable.

While the dragon has often served as China's national symbol, internationally the giant panda appears at least as commonly.

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DEPARTMENT OF ZOOLOGY



STUDENT STUDY PROJECT
ON
COLLECTION OF VARIOUS REGIONS OF DEERS
AY:2017-18
II YEAR B.Sc MZC

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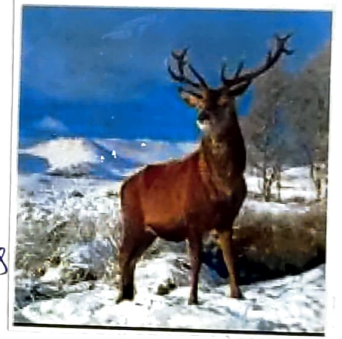
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Location:-

The hangul adds a touch of extraordinary beauty to the already enchanting Kashmir valley. It is state animal of Jammu and Kashmir. It's found in Dachigam National park at elevations of 3,05 meters and also in Himachal Pradesh in northern Chamba. Threatened by habitat destruction this red deer's population has thankfully increased in the past few years.

The Kashmir stag (*Cervus canadensis* hanglu) also called Hanglu, is a sub-species of elk native to India. T



Habit and Habitat:- They prefer to live in dense riverside forests between 1700 and 3600 meters of high valleys, and also in the mountain areas.

They spend winters in the lower levels, and summer on the heights. They found in dense riverside forests, high valleys, and mountains of the Kashmir valley and northern Chamba in Himachal Pradesh.

BLACK BUCK:

The blackbuck, also known as the Indian antelope, is an antelope found in Pakistan, India and Nepal. The blackbuck is the sole extant member of the genus Antelope. The species was described and given its binomial name by Swedish zoologist Carl Linnaeus in 1758. Two sp subspecies are recognized. It stands up to 74 to 84 cm high at the shoulder. Males weigh 20-57 kilograms (44-126 lb), an average of . While the upper parts and outside of the legs are dark brown to black, the underparts and outside of the legs are dark brown to black, the underparts and the insides of the legs are all white. On the other hand females and juveniles are yellowish fawn to fawn.

The black buck inhabits grassy plains and slightly forested areas. Due to their regular need of water, they prefer areas where water is perennially available.

The antelope is native to and found mainly in India, while it is extinct in Bangladesh. Formerly widespread, only small, scattered herds are seen today, largely confined to protected -

areas. During the 20th century, blackbuck numbers declined sharply due to excessive. The blackbuck has significance in Hinduism; Indian and Nepali-villagers do not harm the antelope.

Etymology:

The scientific name of the blackbuck is *Antelope cervicapra*. Its generic name stems from the Latin word *antelope*. The specific name *cervicapra* is composed of the Latin words *cervus* and *capra*. The vernacular name "blackbuck" is a reference, to the dark brown to black colour of the dorsal part of the coat of the male. The earliest recorded use of this name dates back to 1850. Alternative names for the blackbuck are "Indian-antelope."

Taxonomy and evolution:

The blackbuck is the sole member of the genus *Antelope* and is classified under the family *Bovidae*. The species was described and given its binomial name by Swedish zoologist Carl Linnaeus in the 10th edition of *Systema Naturae* in 1758. *Antelope* also includes fossil species, such as *A. subcosta*, *A. planicornis*, and *A. intermedius*.^[13]

Nilgiri tahs:

The Nilgiri tahs, known locally as the Nilgiri ibex or simply ibex, is an ungulate that is endemic to the Nilgiri Hills and the southern portion of the Western Ghats in the states of Tamil Nadu and Kerala in southern India. It is the state animal of Tamil Nadu. Despite its local name, it is more closely related to the sheep of the *Ovis* genus than the ibex and wild goats of the *Capra* genus.

Etymology:

In the Tamil language it is called varaiadu, the term being composed of two Tamil words, varai, a precipice, and adu, a goat. In Malayalam it is pronounced as "varaiyadu" ancient word is classical Tamil was "vasudai" Natimai, 359; Ainkurunuru 287; Pattinappalai, it was previously named *capra-waryado* by John Edward Gray.

Taxonomy

~~Its~~ closest relatives are sheep. Until 2005, it was placed with the Himalayan tahs and the Arabian tahs in the genus *Hemitragus*.

Description,

The nilgiri tahs is a stocky goat with short, coarse fur and a bristly mane. Males are larger than females and of darker colour when mature. Both sexes have curved horns, reaching up to 40 cms for males and 30cms for females. Adult males weigh 80 to 100 kgs. Adult males develop a light grey area on their backs and are thus called "saddlebacks".

Habitat and distribution

The nilgiri tahs inhabits the open montane grassland habitat of the south western Ghats - montane rain forests ecoregion. At elevations from 1,200 to 2,600 metres, the forests open into grasslands. The nilgiri tahs formerly ranged over these grasslands in large herds, before but hunting and poaching in the nineteenth century reduced their population.

Conservation,

As few as 100 nilgiri tahs were left in the wild by the early 20th century. Since that time their numbers have increased somewhat; in a study of the nilgiri tahs population in western Ghats, association with volunteers from college of forestry & veterinary science under Kerala Agricultural University.

Kashmir stag:

The Kashmir stag, also called hangul, is a subspecies of elk native to India, it is found in dense evergreen forests in the high valleys and mountains of the Kashmir valley and northern Chamba district in Himachal Pradesh. In Kashmir, it's found in the Dachigam National Park and of mitochondrial DNA genetic studies have revealed that the hangul is part of the Asian clade of the elk and has not been evaluated by the IUCN.

D Description:

This deer has a light rump patch without including the tail. Its coat colour is brown with a speckling to the hairs. The inner sides of the buttocks are greyish white, while the brow and bez lines are usually close together and above the ears.

† Distribution and Ecology:

This deer lives in groups of two to 18 individuals, in dense evergreen forests, high valleys, and mountains of the Kashmir valley and northern Chamba in Himachal Pradesh, In Kashmir, it's found in the Dachigam National Park. and in the forests of Kishtwar & Bhaderwah.

Threats and conservation

These deer once numbered from about 5000 animals in the beginning of the 20th century (unfortunately, they were threatened, due to habitat destruction, over-grazing by domestic livestock, and poaching. During the 1940s their number was believed to be about 3,000-5,000. As per the latest census in 2008, only around 160 exist.

References:

- 1, BOOK, S.M., Pluhack, J., Kosenzini, R., Kovasi, S. Masset, IUCN Red List of Threatened Species, IUCN.
- 2, Randi, Etore; Mucci, Nadia; Daso-Herquet, P-saucoise Bonnet. Speciation in cervus and implications for conservation.
- 3, Pitra, Christian, Fickel, Jeevans, "Evolution & phylogeny of old world deer".
- 4, captive breeding for Hangul.

External links:

- * Rase Kashmiri deer on verge of extinction. 12 May 2008, REUTERS; The Economic Times, Times of India.
- * Endangered Hangul spotted in many parts of Kashmir. 5 May 2008. P.T.I. Times of India.
- * Wild life institute wants larger area for Hangul deer. April 09, 2008. Aditya V Singh, The Indian Express

Nilgiri tahr.



Scientific classification.

Kingdom ; Animalia.

phylum ; Chordata

class ; Mammalia

order ; Artiodactyla

Family ; Bovidae

Sub-family ; Caprinae

Genus ; Nilgiritragus

Ropiquet & Hassanin, 2005.

Species ; N. hylocoius

Binomial name

Nilgiritragus hylocoius.

Kashmir stag.



Scientific classification

Kingdom	:	Animalia
Phylum	:	Chordata
Class	:	Mammalia
Order	:	Artiodactyla
Family	:	Cervidae
Subfamily	:	Cervinae
Genus	:	Cervus
Species	:	C. canadensis
Subspecies	:	C. c. hanglu

Trinomial name

Cervus canadensis hanglu

Black buck.



scientific classification

Kingdom ; Animalia
Phylum ; chordata
Class ; mammalia
Order ; Artiodactyla
Family ; Bovidae
Sub family ; Antilopinae
Genus ; Antelope
Pallas, 1766
Species ; *A. cervicapra*

Binomial name

Antelope cervicapra
(Linnaeus, 1758)

Sub species

A. c. cervicapra (Linnaeus, 1758).

A. c. saiputanae Zukowsky, 1927

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DEPARTMENT OF ZOOLOGY



STUDENT STUDY PROJECT
ON
INFORMATION ABOUT COMMON MAMMALS
AY:2018-19

II YEAR B.Sc MZC

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The white lion is a rare color mutation of the Timbavati area. White lions are the same as the tawny African lion found in some wildlife reserves in South Africa and in zoos around the world. White lions are not a separate subspecies and are thought to be indigenous to the Timbavati region of South Africa for centuries, although the earliest recorded sighting in this region was in 1938. Regarded as divine by locals, white lions first came to public attention in the 1970s in Chris McBoide's book *The White Lions of Timbavati*. Up until 2009, when the first pride of white lions was reintroduced to the wild, it was widely believed that the white lion could not survive in the wild. It is for this reason that a large part of the population of white lions now reside in zoos.

White lions of Mazanle are not albinos. Their white color is caused by a recessive trait derived from a less-severe mutation in the same gene that causes albinism, distinct from the gene responsible for white tigers. They vary from blonde to near white. This coloration does not appear to disadvantage their survival. The white lions of the Global White Lion Protection Trust [GWLPT] have been reintroduced into their natural habitat and have been hunting and breeding successfully without human intervention for a significant amount of time.



White lion

classification

kingdom : Animalia
phylum : chordata
class : Mammalia
order : Carnivora
family : Felidae
Genus : Panthera
species : Panthera leo

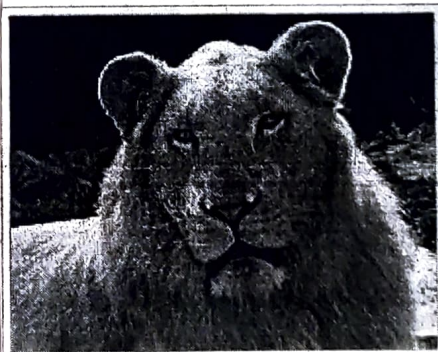
Binominal name: panthera leo

Kruger and uMfolozi white lions

In 1979, three litters containing white lions were recorded in Kruger National Park. In March, a female lion with three white cubs was observed near Tshokwane. In September, three white cubs were seen. Another litter of white female cubs was captured from Kruger National Park and treated for sarcoptic mange. A white lion was observed in the Hluhluwe - uMfolozi Game reserve in Zululand.



Adolescent white lion in Kruger National Park, South Africa

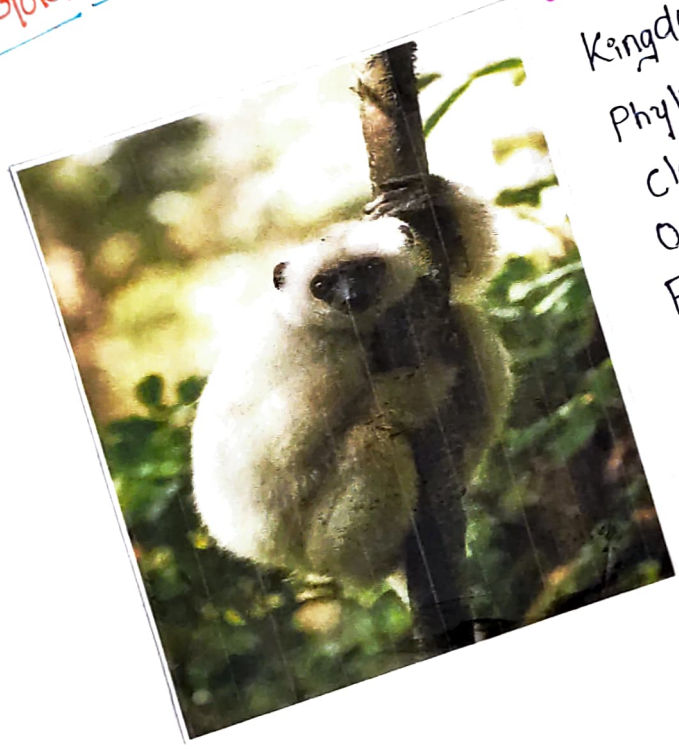


White Lioness - Bratislava Zoo, Slovakia

Golden Crowned Sifaka
(Propithecus Tattersalli)

Classification:

- Kingdom: Animalia
- Phylum: Chordata
- Class: Mammalia
- Order: Primates
- Family: Indridae
- Genus: Propithecus



Golden Crowned Sifaka (Propithecus tattersalli)

Spanish: Indris sifaca

Size: Head-body length: 87 - 94 cm

Tail length: 42 - 47 cm

Weight: 3.5 kg

Habitat: Inhabits dry deciduous or Semi-evergreen remnant forest patches, all known populations are found below 700 meters above sea level.

* The Golden crowned sifaka is the smallest of the sifaka is the smallest of the sifakas.

* And was first described in 1998.

* The coat is creamy white and the common name is derived from the bright Golden orange crown; The shoulders, upper arms, chest and rump may also be tinged with this colour.

* The hairless, black face is drawn into a pronounced muzzle and the eyes are a bright.

* Sifakas such as the Golden crowned sifaka are adapted for upright leaping from tree to tree. Their legs are powerful and considerably longer than the arms.

* Also known as - Tattersalls sifaka.

Biology :-

* They were live in groups of five to six indivi-

(2)
duals, usually with two or more adults from each sex although typically only one female will breed each year.

* Mating occurs towards the end of January and females give birth to one offspring a year, in late June, which is then carried by its mother through the trees.

* Female are dominant within the group, and social bonds are enhanced through grooming, which is carried out using the lower teeth as a comb.

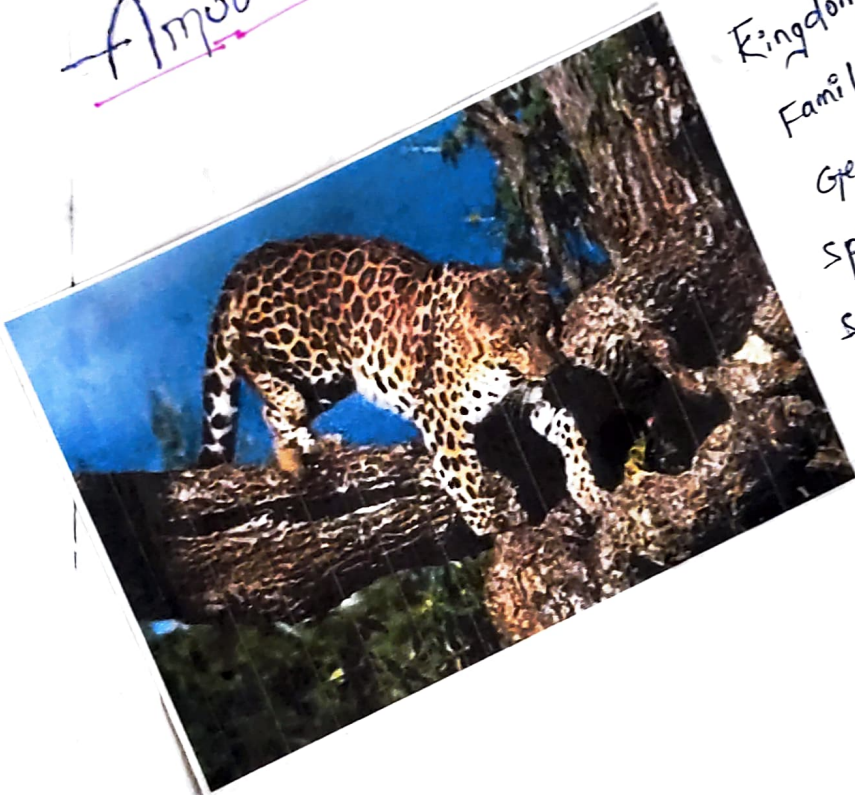
* Golden-crowned sifakas feed on a variety of un-rip fruit, seeds, shoots and leaves bark may also be eaten, particularly in the dry season.

* It is the one of the most limited distributions.

Amur Leopard

Classification

- Kingdom: Animalia
- Family: Felidae
- Genus: Panthera
- Species: Panthera pardus
- Sub-species: P.P. Orientalis



Amur leopard

Status: Critically endangered

Population: More than 60 individuals

Scientific Name: *Panthera pardus orientalis*

Weight: 70 - 105 pounds

Habitats: Temperate, Broadleaf and mixed forests

* People usually think of leopards in the savannas of Africa but in the Russian far east, a rare subspecies has adapted to life in the temperate forests that make up the northern-most part of the species range.

* Similar to other leopards, the Amur leopard can run at speeds of up to 37 miles per hour. This incredible animal has been reported to leap more than 49 feet horizontally and up to 10 feet vertically.

* It is a solitary, nimble footed and strong, it carries and hides unfinished kills so that they aren't taken by other predators, it has been reported that some males stay with that they aren't taken by other predators. It has been reported that some males stay with females. After mating, and may even help with rearing the young.

* Several males sometimes follow and fight over a female. They live for 10-15 years, and in captivity up to 20 years. The Amur leopard is also known as the far east leopard. The manchurian leopard
 (c) Korean leopard.

Illegal wild life Trade:

* The Amur leopard is poached largely for its beautiful, spotted fur. In 1999, an undercover investigation team recovered a female and a male Amur leopard skin, which were being sold for \$500 and \$1000 respectively in the village of Barabash not far from the Kedrovaya pad reserve in Russia.

* The Amur - Heilong covers areas of northeastern China and Russian far east. The region contains one of the most biologically diverse temperate forests in the world, vast steppe grass lands, and the unbroken taiga home.

"Amur leopards are teetering on the brink of extinction, with the establishment of the land of the leopard National park, in conjunction with other conservation efforts, we can now start to focus on how to begin bringing them back."



Crocodile

Scientific Classification	
Kingdom	: Animalia
Phylum	: Chordata
Class	: Reptilia
Order	: Crocodylia
Family	: Crocodylinae
Subfamily	: Crocodylinae
	Cuvier, 1807

Crocodile

crocodiles (Sub Family crocodylinae) or true crocodiles are large aquatic reptiles that live throughout-tropics in Africa, Asia, the Americas and Australia. crocodyline, all of whose members are considered true crocodiles, is classified as a biological subfamily. A broader sense of the term crocodilia, crocodylidae that includes Tomistoma, is not used in this article. The term crocodile here applies only to the species within the subfamily of Crocodylinae. The term is sometimes used even more loosely to include all extant members of the order crocodilia, which includes Tomistoma, the alligators and caimans - the gharials (family Gavialidae), and all other living and fossil crocodylomorpha.

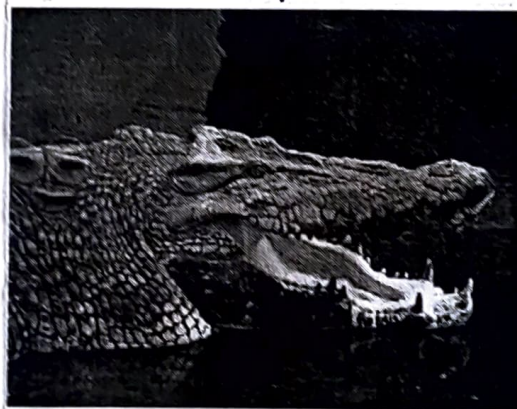


Nile crocodile (*Crocodylus niloticus*)

Characteristics: =

Although they appear to be similar to the untrained eye, crocodiles, alligators and the gharial belong to separate biological families. The gharial having a narrow snout is easier to distinguish, while morphological differences are more difficult to spot in crocodiles and alligators.

The most obvious external differences are visible in the head with crocodiles having narrower and longer heads with a more "V-shaped than a U-shaped" snout compared to alligators and caimans. Another obvious trait is that the upper and lower jaws of the [fall along the edge the along the crocodiles are the same width, and the teeth in the lower jaws fall along the edge or outside the upper jaw when the mouth is closed. Therefore, all are visible unlike an alligator, which possesses small depressions in the upper jaw into which the lower teeth fit. Also when the crocodile's mouth is closed, the large fourth tooth in the lower jaw fits into a constriction in the upper jaw. For hard-to-distinguish specimens, the protruding tooth is the most reliable feature to define the family that the species belongs to. Crocodiles have more webbing on the toes of the hind feet and can better tolerate saltwater due to specialized salt glands for filtering out salt, which are present but non-functioning in alligators.



Saltwater crocodile (*Crocodylus porosus*)

Habites: =

Crocodile size, morphology, behaviour and ecology somewhat differs between species. However, they have many

Similarities in these areas as well. All crocodiles are semi-aquatic and tend to congregated in freshwater habitats such as rivers, lakes, wetlands and sometimes in brackish water and saltwater. They are carnivorous animals feeding mostly on vertebrates such as fish, reptiles, birds, and mammals, and sometimes on invertebrates such as molluscs and crustaceans depending on species and age. All crocodiles are tropical species that, unlike alligators are very sensitive to cold. They separated from other crocodilians during the Eocene era epoch, about 55 million years ago.

Etymology :=

The word crocodile comes from the Ancient Greek κροκόδειλος (crocodile), lizard, used in the phrase ἡ κροκόδειλος τοῦ ποταμοῦ, the lizard of the (Nile) river. There are several variant Greek forms of the word, attested, including the later form κροκόδειλος (crocodeilos) found cited in many English reference work. In the Koine Greek of Roman times, crocodilos and crocodeilos would have been pronounced identically, and either or both may be the source of the Latinized form crocodilus used by the ancient Romans.

tortoise often has a noticeable V-shaped notch below the tail which facilitates passing the eggs. Upon completion of the incubation period, a fully formed hatchling uses an egg tooth to break out of its shell. It digs to the surface of the nest and begins a life of survival on its own. They are hatched with an embryonic egg sac which serves as a source of nutrition for the first three to seven days until they have the strength and mobility to find food. Juvenile tortoises often require a different balance of nutrients than adults, so may eat foods which a more mature tortoise would not. For example, the young of a strictly herbivorous species commonly will consume worms or insect larvae for additional protein.



Young African sulcata tortoise

The number of concentric rings on the carapace, much like the cross section of a tree, can sometimes give a clue to how old the animal is but, since the growth depends highly on the accessibility of food and water, a tortoise that has access to plenty of forage with no seasonal variation will have no noticeable rings. Moreover, some tortoises grow more than one ring per season, and in some others, due to wear, some rings are no longer visible.

Tortoise

Tortoises are a family, Testudinidae, of land-dwelling reptiles in the order Testudines. Tortoises are shielded from predators by a shell. The top part of the shell is the carapace, the underside is the plastron, and the two are connected by the bridge.



Aldabra giant tortoise
(*Aldabrachelys gigantea*)

The carapace is fused to both the vertebrae and ribcage, and tortoises are unique among vertebrates in that the pectoral and pelvic girdles are inside the ribcage rather than outside. Tortoises can vary in size from a few centimeters to two meters. They are usually diurnal animals. They are generally reclusive animals.

Use of the terms turtle, tortoise, and terrapin:-

Differences exist in usage of the common terms turtle, tortoise, and terrapin, depending on the variety of English being used; usage is inconsistent and contradictory. These terms are common names and do not reflect precise biological or taxonomic distinctions.



Tile with two rabbits, two snakes, and a tortoise, illustration for Zakariya al-Qazwini's book, Iran, 19th century

The American Society of Ichthyologists and Herpetologists uses "turtle" to describe all species of the order Testudines, regardless of whether they are land-dwelling or sea-dwelling, and uses "tortoise" as more specific term for slow-moving terrestrial species. General American usage agrees; turtle is often a general term; tortoise is used only in reference to terrestrial turtles, or more narrowly, only those members of Testudinidae, the family of

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DEPARTMENT OF ZOOLOGY



STUDENT STUDY PROJECT

ON

COLLECTING OF SPECIAL STORY ON GIANT ANIMAL(GORILLA)

AY:2018-19

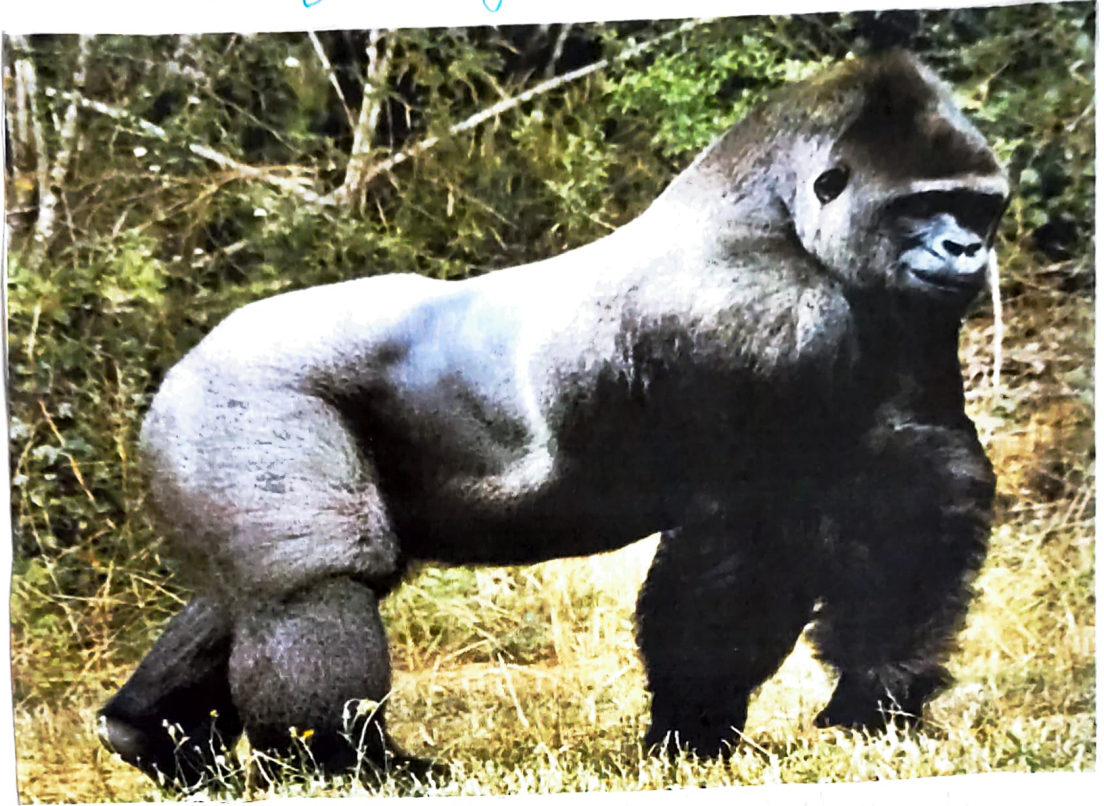
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4	T.SAVARAMMA	17033024445553
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King Kong



King Kong in a promotional image from the original 1933 film.

First appearance :- King Kong (1933)

Created by :- Edgar Wallace
Merran C. Cooper

Portrayed by :- Willis O'Brien (1933)
Rick Baker (1976)
Peter Elliot (1986)
Andy Serkis (2005)
Terry Notary (2017)

Information

Aliases :- The Eighth Wonder of the World

Species :- Giant Monster

Family :- Kiko (son)
Lady Kong (wife)
Kong Jr. (son)

King Kong

King Kong is a giant movie monster, resembling a colossal ape, that has appeared in various media since 1933. The character first appeared in the 1933 film King Kong, which received universal acclaim upon its initial release and re-releases. The film was remade in 1976 and 2005. The character has become one of the world's most famous movie icons, having inspired countless sequels, ~~re~~ remakes, spin-offs, imitations, parodies, cartoons, books, ~~remakes~~, spin-offs, comics, video games, theme park rides, and even a stage play. His role in the different narrative varies, ranging from a rampaging monster to a tragic anti-hero.

Overview:-

The King Kong character was conceived and created by American filmmaker Merian C. Cooper. In the original film, the character's name is Kong, a name given to him by the inhabitants of "Skull Island" in the Indian Ocean, where Kong lives along with other oversized animals such as a plesiosaur, pterosaurs and other dinosaurs. An American film crew, led by Carl Denham, captures Kong and takes him to New York City to be exhibited as the "English wonder of the world".

Kong escapes and climbs the Empire State Building, only to fall from the skyscraper after being attacked by airplanes with guns. Denham comments, "It was beauty killed the beast," for he climbs the building in the first place only in an attempt to protect Ann Darrow, an actress originally offered up to Kong on Skull Island as

mind.

Decades later in his adult years, Cooper became involved in the motion picture industry. While filming *The Four Feathers* in Africa, he came into contact with a family of baboons. This gave him the idea to make a picture about primates.



Merian C. Cooper glances up at his creation.

A year later when he got to RKO, Cooper wanted to film a "terror gorilla picture." As the story was being fleshed out, Cooper decided to make his gorilla giant sized. "He came up with the ending before the rest of the on top of the building."

Around this time, Cooper began to refer to his project as a "Giant terror gorilla picture" featuring "A gigantic semi-humanoid gorilla pitted against modern civilization."



King Kong in a promotional image from the original

1933 film

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DEPARTMENT OF ZOOLOGY



STUDENT STUDY PROJECT
ON
COLLECTION OF DIFFERENT TYPES OF AVES
AY:2019-2020
II YEAR B.Sc BZC

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Handwritten text in a decorative, stylized font, possibly a signature or a name, rendered in blue and pink colors. The text is oriented vertically and appears to read "Katherine".

Painted bunting

The "Painted bunting" (*passerina ciris*) is a species of bird in the cardinal family, cardinalidae, that is native to "North America". The bright plumage of the male only comes in the second year of life, in the first year they can only be distinguished from the female by close inspection.

Taxonomy := The painted bunting was originally described by Carl Linnaeus in his eighteenth-century work *Systema Naturae*. There are two recognized subspecies of the painted bunting:

1) *P.C. ciris* - (Linnaeus, 1758):

nominate, breeds in the southeastern United States.

2) *P.C. pallidior* - means, 1911:

breeds in south central US and northern Mexico.

Painted bunting



Male

Description := The male painted bunting is often described as the most beautiful bird in North America and as such has been nicknamed nonpareil, or "without equal." Its colors, dark blue head, green back, red rump, and underparts, make it extremely easy to identify, but it can still be difficult to spot since it often skulks in foliage even when it is singing. The plumage of female and juvenile painted

densely vegetated savanna. The breeding range is divided into two geographically separate areas. These include southern Arizona, southern New Mexico, southern and eastern Texas, Oklahoma, Arkansas, Louisiana, northern Florida, coastal Georgia, the southern coast and inland waterways such as the Santee River of South Carolina and northern Mexico. They winter in South Florida, Cuba, the Bahamas, along both coasts of Mexico & through much of Central America. Occasionally, they may be vagrants further north, including to New York, Pennsylvania and New Jersey. The bird is also found every few years as far north as New Brunswick, Canada.

Behavior: = painted buntings are shy, secretive & often difficult to observe for the human eye, though can be fairly approachable where habituated to bird feeders. Males sing in spring from exposed perches to advertise their territories. They also engage in visual displays including flying bouncingly like a butterfly or in an upright display, body-fluff display, bow display and wing-quiver display. These displays are used in agonistic conflicts with other males or in

colour: -

The Montserrat Oriole (*Icterus oberi*) is a medium-sized black and yellow icterid (the same family as many black birds, meadowlarks, cowbirds, grackles" and others including the New World Orioles)

Location: -

It inhabits the centre Hills and south Soufriere Hills important Bird Areas on the island of Montserrat in the Lesser Antilles of the West Indies, and is the national bird of this British territory. It is threatened by habitat loss, and has been classified by Bird Life International as critically Endangered, with a current estimated population of between 300 and 800. Much of its habitat was destroyed by deforestation, Hurricane Hugo and the volcanic activity 1995 and 1997.



The oriole once was found in areas: the bamboo forest east of Galways Soufriere, the leeward slopes of the chances peak mountain and the centre Hills.



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Group:- Bsc [MzC]

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Department of

Zoology

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"ZOOLOGY"

Eagle

From wikipedia, the free encyclopedia

Eagle:- is a common name for many large birds of prey of the family Accipitridae; it belongs to several groups of genera that are not necessarily closely related to each other.

Most of the 60 species of eagles are from Eurasia and Africa. Outside this area, just 14 species can be found - two in North America, nine in central and South America, and three in Australia.

Description:- Eagles are large, powerfully built birds of prey, with heavy heads and beaks. Even the smallest eagles, such as the booted eagle, which is comparable in size to a common buzzard or red-tailed hawk, have relatively long and more evenly broad wings, and more direct, faster flight - despite the reduced size of aerodynamic feathers. The smallest species of eagle is the south nicobar serpent eagle at 450 g (0.99 lb) and 20 cm (8 in). The largest species are discussed below. Strong muscular legs, and powerful talons. Eagle's eyes are extremely powerful having up to 3.6 times human acuity for the martial eagle, which enables them to spot potential prey from a very long distance. The female of all known species of eagles is larger than the male. Many species lay two eggs, but the older, larger chick frequently kills its younger sibling once it has hatched. The dominant chick tends to be a female, as they are bigger than the male.

eagle



Bald eagle

Scientific classification

Kingdom : Animalia

Phylum : Chordata

Class : Aves

Order : Accipitriformes

Family : Accipitridae

Bionomial Name

Icterus oberi



mosterret orile

classification :-

Kingdom : Animalia

phylum : chordata

class : Aves

Order : passeriformes

Family : Icteridae

Genus : Icterus

species : I. Oberi

Great Indian Bustard Bird

The Great Indian Bustard found in India and the adjoining regions of Pakistan.

Scientific name: *Ardeotis nigricaps*

Higher classification: Ardeotis

Rank: species

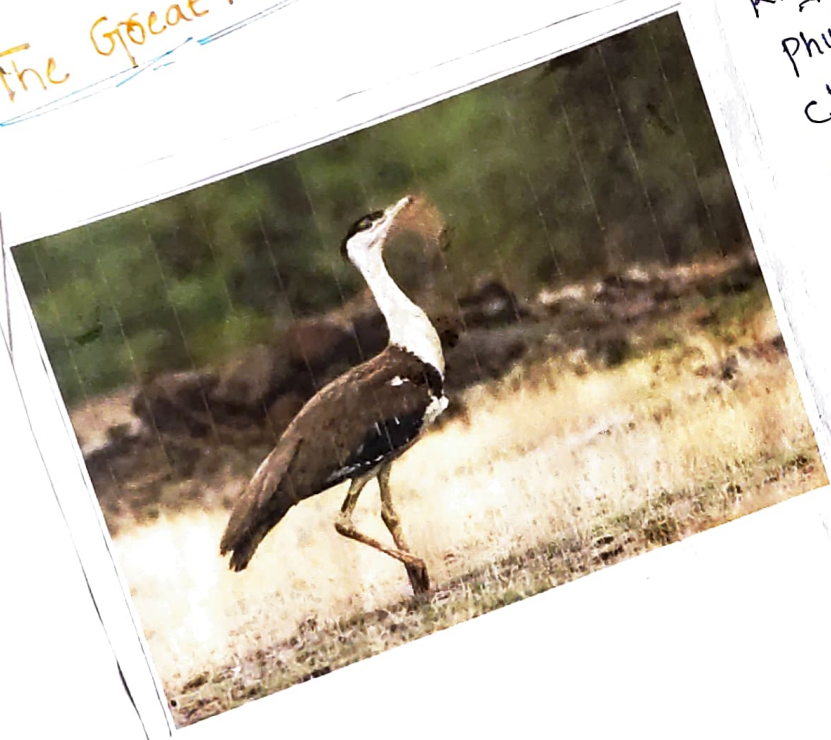
* Bustards, including foricans and korlians, are large terrestrial birds living mainly in dry grassland areas and on the steppes of old world. They range in length from 40 to 150 cm. They make up the family Otididae. Bustards are omnivorous and opportunistic, eating leaves, buds, seeds, fruit, small vertebrates and invertebrates.

* Bustards are all fairly large with the two largest species, the koribustard (*Ardeotis kori*) and the Great bustard (*Otis tarda*), being frequently cited as the world's heaviest flying birds.

* The smallest species is the little brown bustard (*Eupodotis himalis*), which is around 40 cm long and weighs around 600g (1.3 lb) on average.

* In most bustards, males are substantially larger than females, often about 30% longer and sometimes more than twice weight.

The Great Indian Bustard



Classification

- Kingdom: Animalia
- Phylum: Chordata
- Class: Aves
- Clade: ^{Volger 1830} Otidimorphae
- Family: ^{Rafinesque 1815} Otididae

170 years. Re-introduced bustards also hatched chicks in 2010.

Status and conservation:

Most species are declining or endangered through habitat loss and hunting, even where they are nominally protected.

* Bustards are gregarious outside the breeding season, but are very wary and difficult to approach in the open habitats they prefer.

* The female lays three to five dark, speckled eggs in a scrape in the ground, and incubates them alone.



Summer tanager

Classification

Kingdom	: Animalia
Phylum	: Chordata
Class	: Aves
Order	: Passeriformes
Sub order	: Passeri
Intraorder	: Passerida
Family	: Cardinalidae
Genus	: Piranga
Species	: P. rubra

Binominal name : *Piranga rubra*

The summer tanager (*Piranga rubra*) is a medium sized American songbird. Formerly placed in the tanager family. (Thraupidae), it and other members of its genus are now classified in the cardinal family.

The species plumage and vocalizations are similar to other members of the cardinal family.

The genus name *Piranga* is from Tupi *Tijepiranga*, the name for an unknown small bird, and the specific *rubra* is from Latin *ruber*, red.

Their breeding habit is open wooded areas, especially with oaks, across the southern United States, extending as far north as Iowa. These birds migrate to Mexico, Central America and northern South America. This tanager is an extremely rare vagrant to western Europe.

Adults have stout pointed bills and measure 17cm (6.7 in) length and 29g (1.0 oz) in weight. Adult males are rose red and similar in appearance to the hepatic tanager, although the latter has a dark bill, females are orangish on the underparts and olive on top, with olive-brown wings and tail. As with all other birds, all red and orange colorations are acquired through their diet.

References

- * Bird life international (2012). "Piranga rubra". IUCN Red list of Threatened species. Version 2013.2. International union for conservation of Nature.

External skills

- * Summer tanager bird sound from the florida museum of natural history.
- * Summer tanager species account at Neotropical birds.



Ecology

The snowy owl is typically found in the northern circumpolar region, where it makes its summer home north of latitude 60° north. However, it is a particularly nomadic bird, and because population fluctuations in its prey species can force it to relocate, it has been known to breed at more southerly latitudes. During the last glacial there was a central European subspecies, *Bubo scandiacus gallicus* but no modern subspecies are recognized.

This species of owl nests on the ground, building a scrape on top of a mound or boulder. A site with good visibility of chosen, such as the top of a mound with ready access to hunting areas and a lack of snow. Gravel bars and abandoned eagle nests may be used. The female scrapes a small hollow before laying the eggs. Breeding occurs in May to June, and depending on the amount of prey available, clutch sizes range from 3 to 11 eggs, which are laid singly, approximately every other day over the course of several days. Hatching takes place approximately five weeks after laying, and the pure white young are cared by both parents. Males may mate with two females that may nest about a kilometer apart. Some individuals stay on the breeding grounds while others migrate.



Passot

Classification:

- Kingdom : Animalia
- Phylum : Chordata
- Class : Aves
- Clade : Psittacopasser
- Order : Psittaciformes
- Wagler, 1830

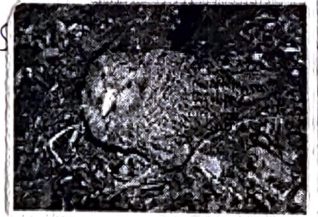
Superfamilies

- Cacatuoidea (Cockatoos)
- Psittacoidea (True parrots)
- Strigopoidea (New Zealand parrots)

* Parrot :-

Classification :-

parrots, also known as psittacines /'sɪtəsaɪnz/, are birds of the roughly 393 species in 92 genera that make up the order Psittaciformes, found in most tropical and subtropical regions. The order is subdivided into three superfamilies: the psittacoidea ("true" parrots), the Cacatuoidea (cockatoos), and the Strigopoidea (New Zealand parrots). Parrots have a generally pantropical distribution with several species inhabiting temperate regions in the Southern Hemisphere, as well. The greatest diversity of parrots is in South America and Australia.



Characteristics :-

Characteristic features of parrots include a strong curved bill, an upright stance, strong legs, and clawed zygodactyl feet. Many parrots are vividly coloured, and some are multi-coloured. Most parrots exhibit little or no sexual dimorphism in the visual spectrum. They form the most variably sized bird order in terms of length.



Food habit :-

The most important components of most parrots' diets are seeds, nuts, fruit, buds, and other plants material. A few species sometimes eat animals and carrion, while the lorries and lorikeets are specialised for feeding on floral nectar and soft fruits. Almost all parrots nest in tree hollows, and lay white eggs from which hatch altricial (helpless) young, as well as hunting.



Voices :-

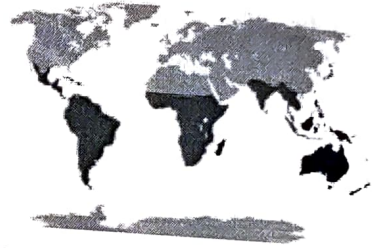
Parrots, along with ravens, crows, jays, and magpies are among the most intelligent birds, and the ability of some species to imitate human voices enhances their popularity as pets. Some parrots are intelligent and talk at the level of a four- to five-year-old human. Trapping wild parrots for the pet trade as well as hunting, habitat loss, and competition from invasive species, has diminished wild populations, with parrots being subjected to more exploitation than any other group of birds.



Taxonomy :=

Origins and Evolution :

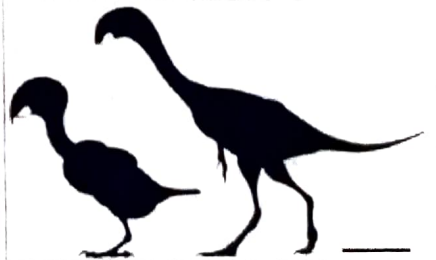
Psittaciform diversity in South America and Australasia suggests that the order may have evolved in Gondwana, centred in Australasia. The scarcity of parrots in the fossil record, however, presents difficulties in confirming the hypothesis, and there is currently a higher amount of fossil remains from the northern hemisphere in the early Cenozoic. Molecular studies suggest that parrots evolved approximately 59 million years ago (mya) (range 66 - 51 mya) in Gondwana. The three major clades of Neotropical parrots originated about 50 mya (range 57 -



Range of parrots, all species (red)

A single 15mm (0.6in) fragment from a large lower bill (UCMP 143274) found in deposits from the Lance Creek F Formation in Niobrara County, Wyoming, had been thought to be the oldest parrot fossil and is presumed to have originated from the late Cretaceous period, which makes it about 70 million year old. The earliest-known unequivocal parrot fossils. Likewise

the earliest parrots do not have the specialised crushing bills of modern species. If so they probably had not evolved their morphological autapomorphies yet but were generalised arboreal birds. The combined evidence supported the hypothesis of psittaciformes being near



Fossil dentary specimen UCMP 143274 restored as a parrot (left) or an oviraptorosaur



snowyowl

classification
Phylum : chordata
class : Aves
Order : strigiformes
family : strigidae
Genus : Bubo
Species : B. scandiacus

Binominal Name : Bubo scandiacus

The snowy owl is a large, white owl of the typical owl family. Snowy owls are native to Arctic regions in North America and Eurasia. Males are almost all white, while females have more flecks of black plumage. Juvenile snowy owls have black feathers until they turn white. The snowy owl is a ground nester that predominantly hunts rodents.

Taxonomy

The snowy owl was one of the many bird species originally described by Linnaeus in the landmark 1758 10th edition of his *Systema*.

Natural, where it given the binominal name of *Strix scandiaca*. The genus name *Bubo* is Latin for the Eurasian eagle-owl and *scandiaca* is New Latin for Scandinavia.

Until recently, the snowy owl regarded as the sole member of a distinct genus, as *Nyctea scandiaca*, but mtDNA cytochrome b sequence data ~~is~~ shows that it is very closely related to the horned owls in the genus *Bubo*. However, some authorities debate this classification, still preferring *Nyctea*.

Description

This yellow-eyed, black beaked white bird is easily recognisable. It is 52-71 cm long, with a 125-150 cm wingspan. Also, these owls can weigh anywhere from 1.6 to 3 kg (3.5 to 6.6 lb). The average lifespan in the wild is 9.5 years. It is one of the largest species of owl land, in North America.

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DEPARTMENT OF ZOOLOGY



STUDENT STUDY PROJECT

ON

INFORMATION ABOUT CANADENSIS AND GANGETIC DOLPHIN

AY:2019-2020

II YEAR B.Sc BZC

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Binomial Name :- Platanista Gangetica

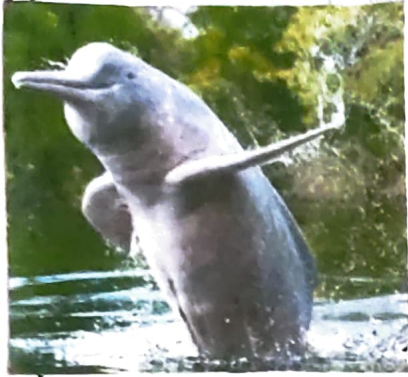


ganges river dolphin

Classification

Kingdom : Animalia
phylum : Chordata
class : Mammalia
order : Artiodactyla
Infra order: Cetacea
Family: Platanistidae
Genus : Platanista
Species: P. Gangetica

Dolphins are one of the oldest creatures in the world along with some species of turtles, crocodiles and sharks. The Ganges river dolphin was officially discovered in 1801. Ganges river dolphins once lived in the Ganges.



The Ganges river dolphin can only live in fresh water and is essentially blind. They hunt by emitting ultrasonic sounds, which bounce off of fish and other prey, enabling them to see an image in their mind. They are frequently found alone or in small groups and generally a mother and calf travel together. Calves are chocolate brown at birth and then have grey-brown smooth, hairless skin as adults. Females are larger than males and give birth once every two to three years to only one calf.

The immediate danger for the resident population of *P. gangetica* in National Chambal Sanctuary is the decrease in river depth and appearance of sand bars dividing the river course into smaller segments.



* In 1996, the Wild Life Advisory Committee and Wild life Institute were established for seeking advice on different features of Wild life Conservation and Matters related to it.

There are several other initiatives which have been taken up by the government to save the Endangered Species of India.

India is part of five main international Conventions which are associated to Wild life conservation. They are

- (i) Convention on International Conventions Trade in Endangered species. [CITES]
- (ii) Coalition Against Wildlife Trafficking [CAWT]
- (iii) International Whaling Commission [IWC]
- (iv) United Nations Educational, scientific and cultural Organization - World Heritage Committee. (UNESCO-WHC)
- (v) Convention on Migratory species [CMS]

Few ways to save Endangered Animals:-

- * If pollution can be controlled all across the globe then it can have a major positive impact on the fish and birds all over the world.
- * To save the Endangered Animals from extinction, a number of breeding programmes have been introduced. The government, NGOs and other corporate bodies should come forward for this noble cause as this programme involves dedicated and special people and of course a lot of money.
- * Re-introducing the Endangered animals to the wild once their numbers increase has become successful in some cases though all species have not done well.
- * If hunting and poaching can be controlled then there can be a significant change in the numbers of the Endangered animals.



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DEPARTMENT OF ZOOLOGY

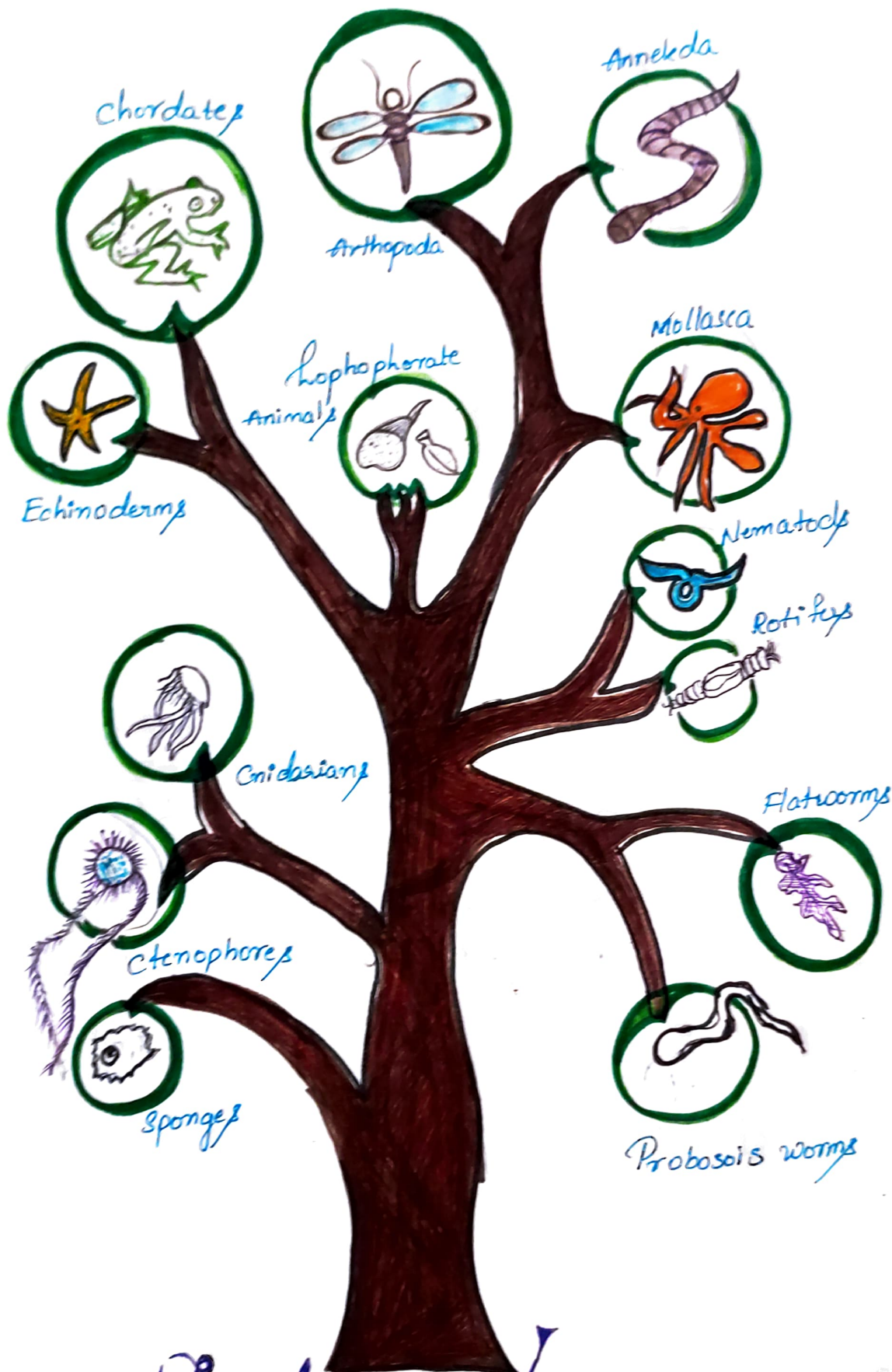


STUDENT STUDY PROJECT
ON
INFORMATION ABOUT UNSPECIFIED INVERTEBRATES
AY:2020-21
I YEAR B.Sc BZC,MZC & BT.ZC

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Animal ... Kingdom ...

Phylum - Protozoa :-

Taxoplasma classification :-

Phylum :- Apicomplexa / Protozoa

Class :- Sporozoa

Family :- Toxoplasmatidae

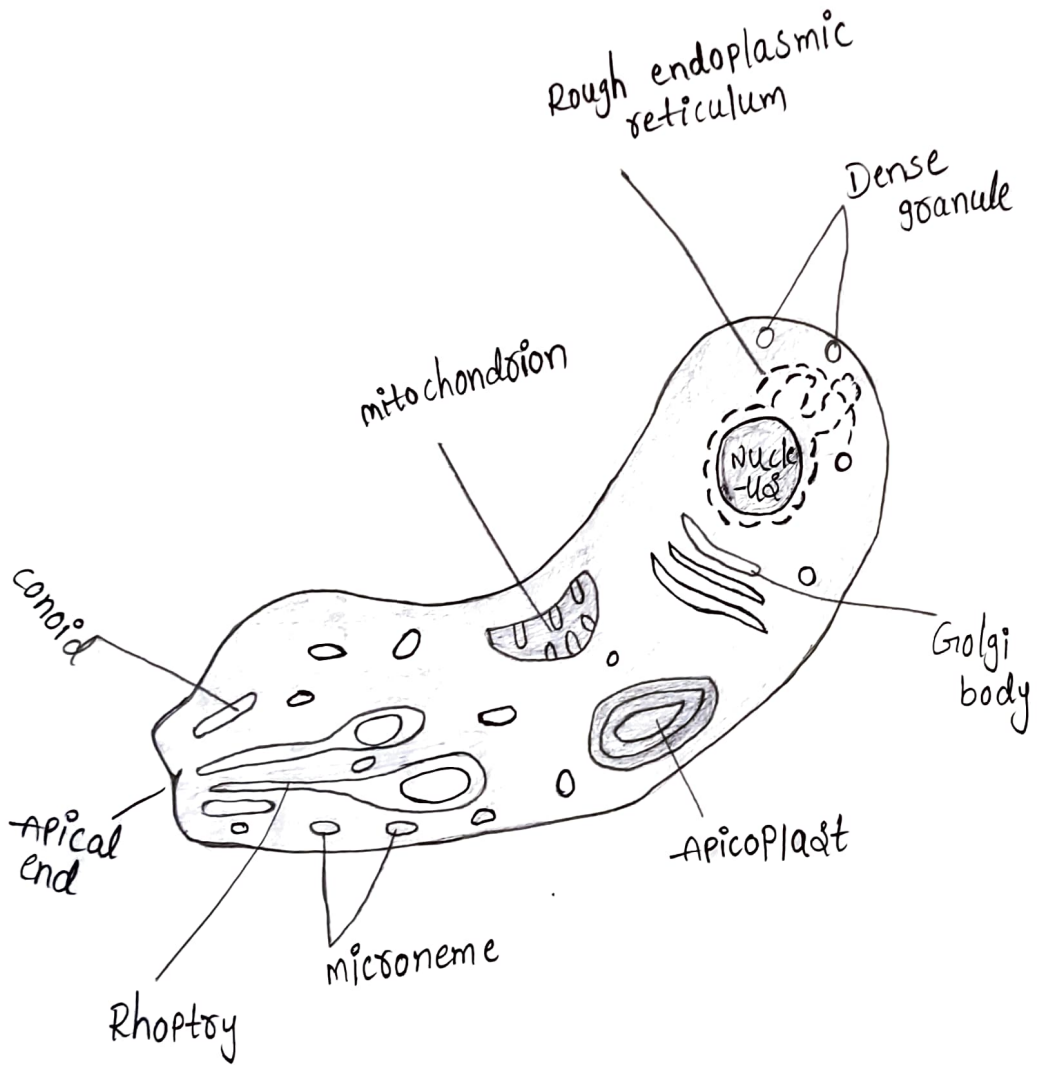
Genus :- Toxoplasma

Species :- T. gondii

Order :- Eucoccidia

King dom :- Alveolata

Introduction :- Taxoplasma gondii which is intracellular protozoan is a food and water borne parasite about 1 billion people in the world T. gondii is a zoonotic protozoan that can be infect all warm blooded animals including birds farm animals, marine mammals, and humans (2-4) cats are definitive host and shed oocysts via feces for 1 to 2 weeks after a new infection. Oocysts are sporulated in environmental condition 1-5 sporulated oocyst



Toxoplasma gondii

Phylum - Protozoa :-

② Nosema bombycis :-

Nosema bombycis classification :-

Phylum :- Microsporidia

class :- Haplophasea / microspora

Family :- Nosematidae

Genus :- Nosema

Species :- Bombycis

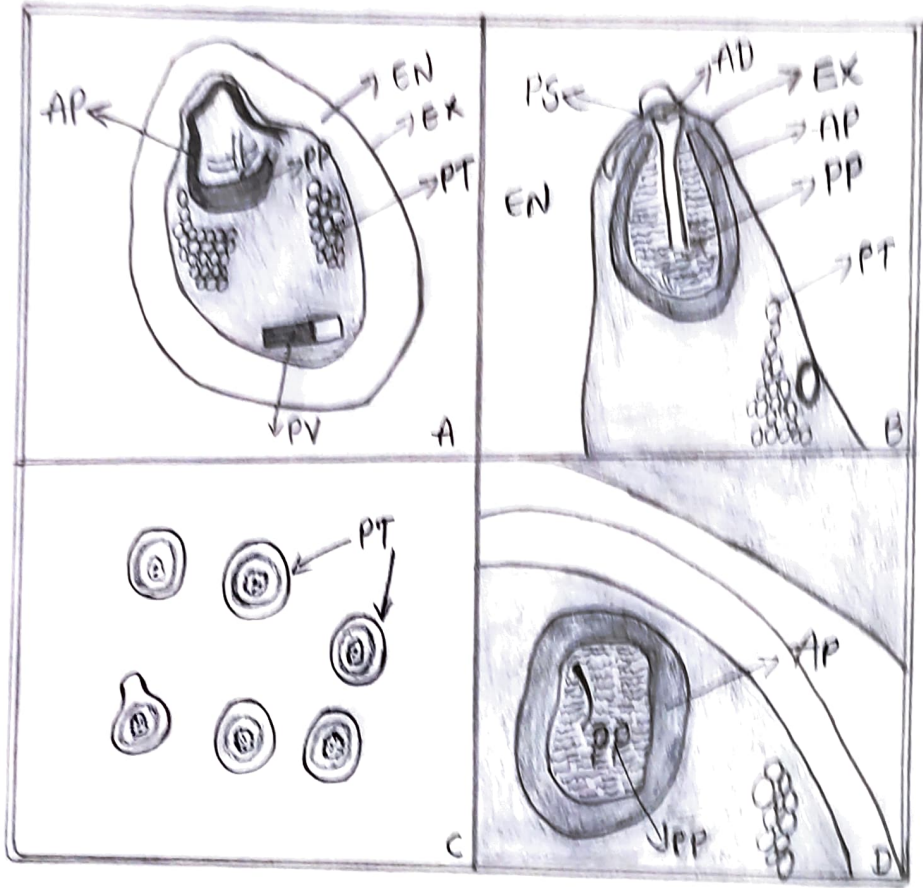
order :- Dissociodihaplophasida

Kingdom :- Fungi

Introduction :-

Nosema bombycis is a microscopic protozoa causes PEBRINE disease of Silk worm. It was first recorded in France in 1845 and later spread to Italy, Spain, Syria and Romania. It was responsible for the collapse of the French and Italian industry in 1865. Natural silk is produced in sixty countries.

Nosema Bombycid



② Phylum - Porifera :-

① Leucosolenia classification :-

Phylum :- Porifera

class :- Calcarea

Family :- Leucosoleniidae

Genus :- Leucosolenia

Species :- Leucosolenia blanca

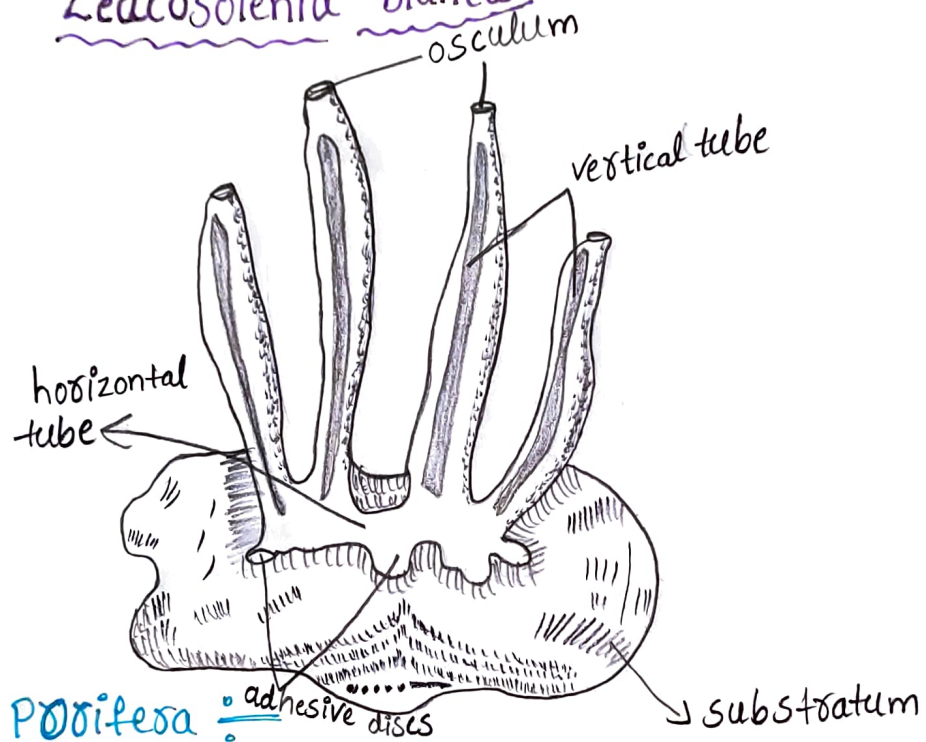
Kingdom :- Animalia

Introduction :-

A new species of Leucosolenia, sp. nov. is described. This new species was collected in a scallop-breeding pond from the Yellow sea and preserved in 75% ethanol. The sponge consists of a dense reticulation of ascon tubes, with the surface minutely hispid and the consistency soft and fragile. Spiculation of the new species consists of diactines, which are smooth

single or slightly curved, calcareous iroactines of two types. which short and curved apical accined. slightly overlaps and is some irregularly assembled.
 ① The regeneration of the body wall ② The regeneration of the amputated oscular tube.

Leucosolenia blanca



Phylum - Porifera : adhesive discs

② Phylum - Hyalonema classification :

phylum - Porifera

class - Hexactinellida

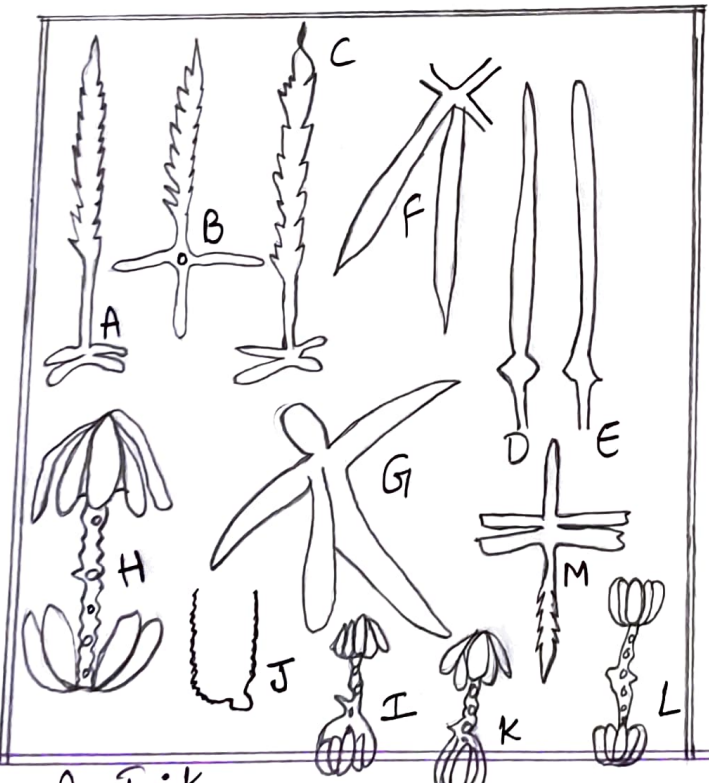
Family - Hyalonematidae

Genus - Hyalonema Gray

Species - Hyalonema Sieboldii

China (71%) and India (17%) are the major producers of silk. India has a unique distinction of being the only country in world producing four varieties of silk viz. The microsporidia are a large group of intracellular parasites with a broad range of hosts, including humans. Microsporidia is a group of species-forming that a large number of vertebrate and invertebrate hosts. For the last three decades reports of microsporidia infections have increased significantly. People diagnosed HIV/AIDS.

Hyalonema sieboldii



A-I; K
0.2 mm

J; L-M
0.05 mm

③ Phylum - Cnidaria :-

① Rhizostoma classification :-

Phylum :- Cnidaria

Class :- Scyphozoa

Family :- Rhizostomeae / Rhizostomatidae

Genus :- Rhizostoma curies

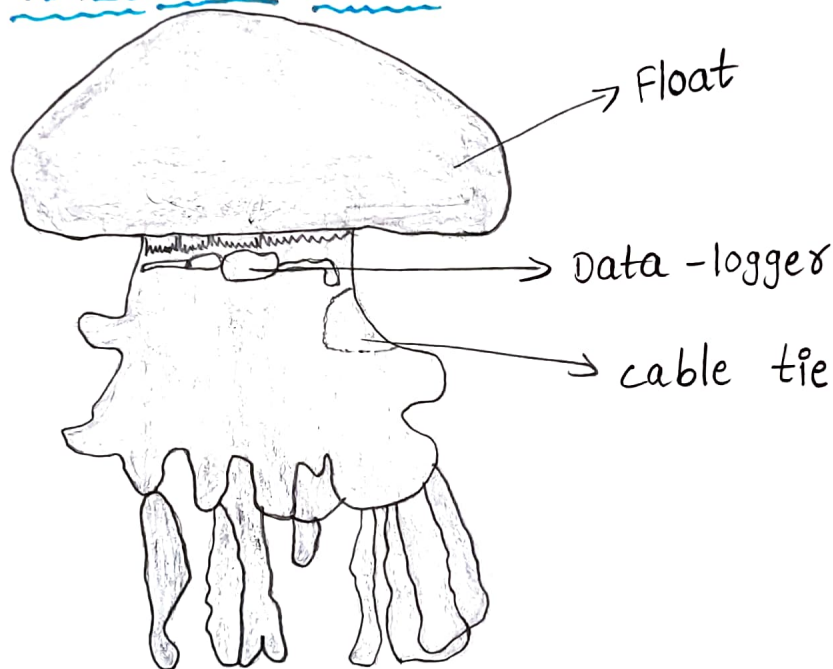
Species :- Rhizostoma pulmo

Kingdom :- Animalia

Rhizostoma pulmo the Mediterranean basin is one of the regions heavily affected by Jellyfish bloom phenomenon mainly due to the presence of Scyphozoans such as Rhizostoma pulmo. The jellyfish have few natural predators, and their bodies represent an organic rich substrate that can support rapid bacterial growth with great impact on the structure of marine food webs. In Asiatic countries, Jellyfish are widely studied for their health benefits. But their nutritional and values still

Remain poorly characterized. Jelly fish represent one of the most widespread components of marine ecosystems and their presence as a natural phenomenon is strictly related to seasonality. In recent years, numerous outbreaks of jelly fish have been recorded in many marine areas this species have the most abundant along the mediterranean coasts in recent.

Rhizostoma Pulmo



② zoanthus classification :-

Phylum - Cnidaria

class - Anthozoa

Family - Zoanthidae

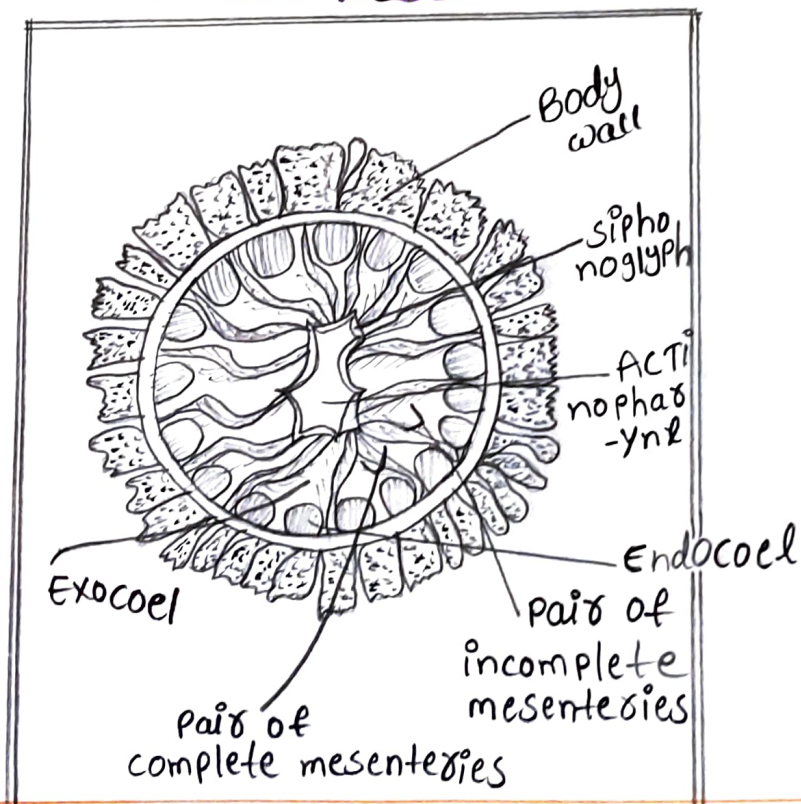
Genus - zoanthus

Species - zoanthus giganteus

King dom - Animalia

The clear method of identifying species in the zoanthid genus *Zoanthus* has been established, due in part to the morphological plasticity of this genus. Previous research utilizing the mitochondrial cytochrome oxidase I gene (COI) as a phylogenetic marker indicated that *Zoanthus* spp. The encrusting anemone zoanthid genus *Zoanthus* is distributed worldwide in shallow subtropical and tropical and tropical waters, and is commonly found on rocks and coral reef edges exposed. Studies on *Zoanthus* spp.

Zoanthus *giganthus*



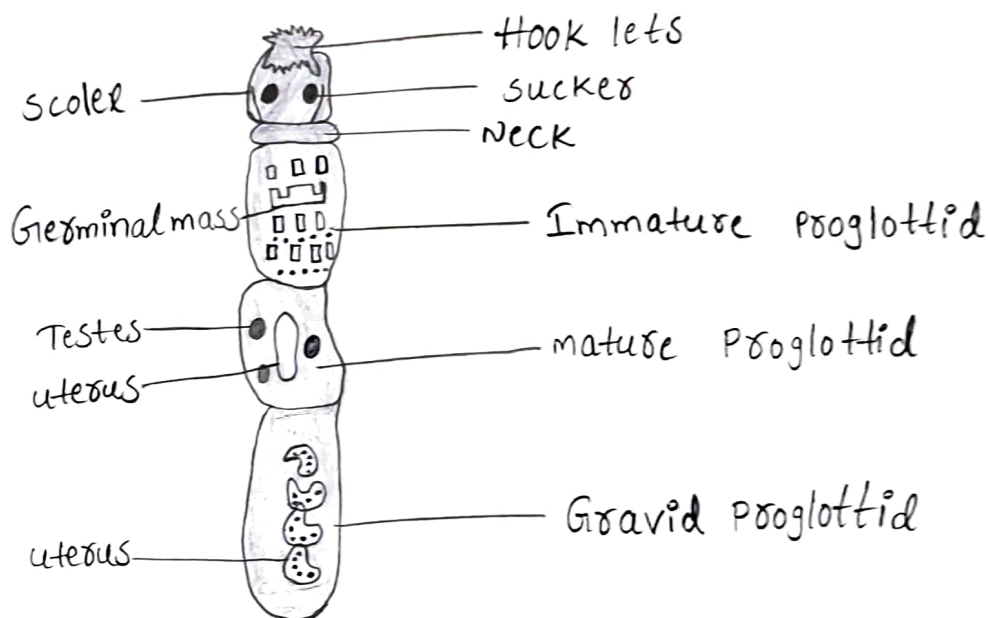
4) Phylum - Platyhelminthes :-

1) Echinococcus classification :-

- Phylum — Platyhelminthes
- class — cestoda
- Family — Taenidae
- Genus — Echinococcus
- Species — Echinococcus granulosus
- King dom — Animalia

Hydatid cysts of Echinococcus granulosus develop in internal organs of humans and other intermediate hosts as unilocular fluid-filled bladders. The definitive hosts of E. granulosus are carnivorous such as dogs and wolves, which are infected by ingestion of offal containing hydatid cysts with viable protoscolex. After ingestion, the evaginate, attach to the canine intestinal mucosa and developed in to adult stages. Sexual maturity is reached 4-5 weeks

later. Eggs are gravid proglottids are shed in the feces. Following ingestion by human or ungulate intermediate host and through blood or lymph vessels to the liver, lungs, or other organs, since the life cycle on carnivores eating infected herbivores, is an important parasite disease caused by the dog tapeworm *Echinococcus granulosus*.



Echinococcus granulosus

② convoluta classification:

Phylum - Xenacoelomorpha

Class - Turbellaria

Family - convolutidae

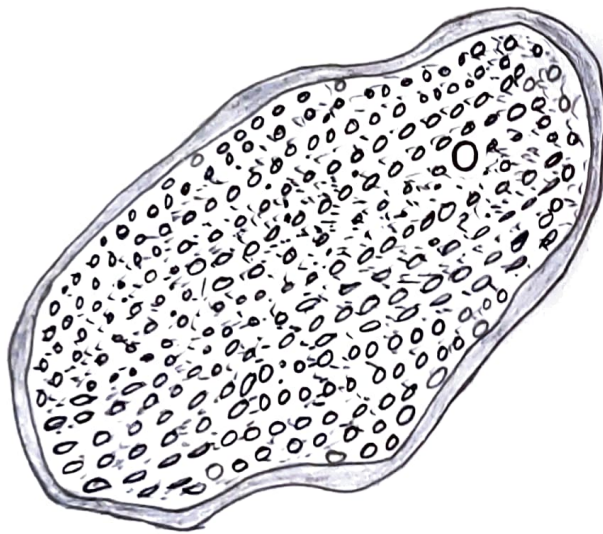
Genus - convoluta

Species - c.convoluta

Kingdom: Animalia

A distinct smell of dimethylsulfide (DMS) was noted at the edge of the intertidal mudflat of Marennes-Oleron Bay, at the French Atlantic coast, where dense populations of the marine flat-torm *convoluta roscoffensis* Graft were present. In the field, *convoluta* colonies are easily recognized as deep green spots on the sand between the tide marks on the edge of residual seawater. A feature of *c. roscoffensis* that has not been reported.

convoluta convoluta

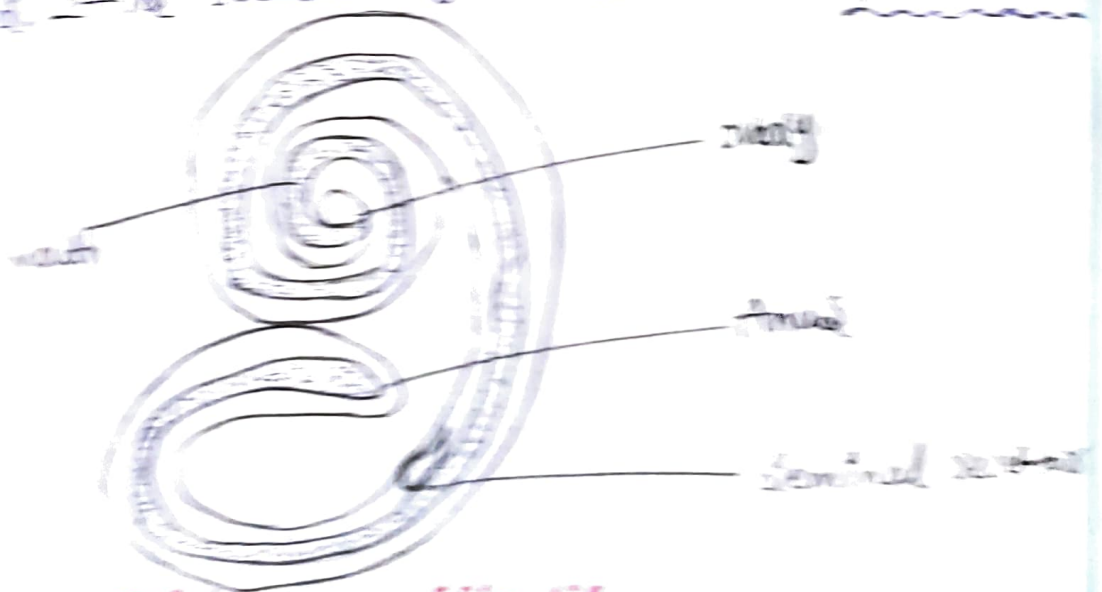


5) Phylum - nematoda :-

ii) Trichinella classification:-

- Kingdom - Animalia
- Phylum - nematoda
- CLASS - Adenophorea / Aphanorhiza
- order - Trichinurida
- Family - Trichinellidae
- Genus - Trichinella
- Species - Trichinella spiralis

⇒ Trichinella spiralis is a multicellular nematode parasite
 ⇒ rodent, bear, human and many other animals are the hosts of
 this parasite. It is responsible for trichinosis in man.



Trichinella spiralis

⑤ Phylum - Nematoda :-

② Ancylostoma classification :-

King dom :- Animalia

Phylum :- Nematoda

class :- Secernentea / Phasmida

order :- Strongylida

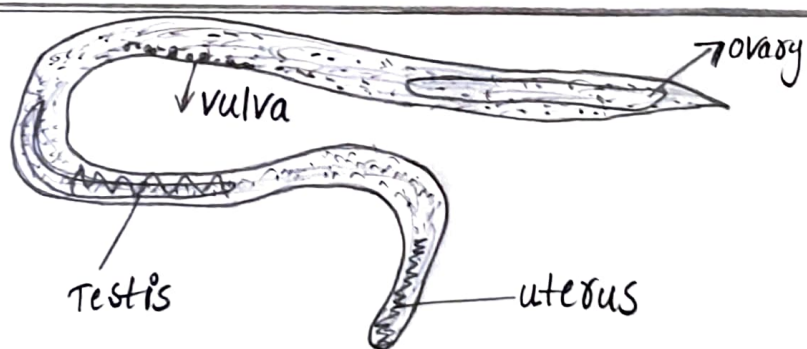
Family :- Ancylostomatidae

Genus :- Ancylostoma

Species :- Ancylostoma duodenale

⇒ Intestinal hook worm disease in human is caused by Ancylostoma duodenale.

⇒ Hook worm symptoms are abdominal pain, intestinal cramps, nausea, fever, a loss of appetite, blood in your stool. A ceylanium and Neacator americanus.



Ancylostoma duodenale

⑥ Phylum - Annelida :-

① Protodrilus classification :-

King dom — Animalia

phylum — Annelida

class — Polychaeta

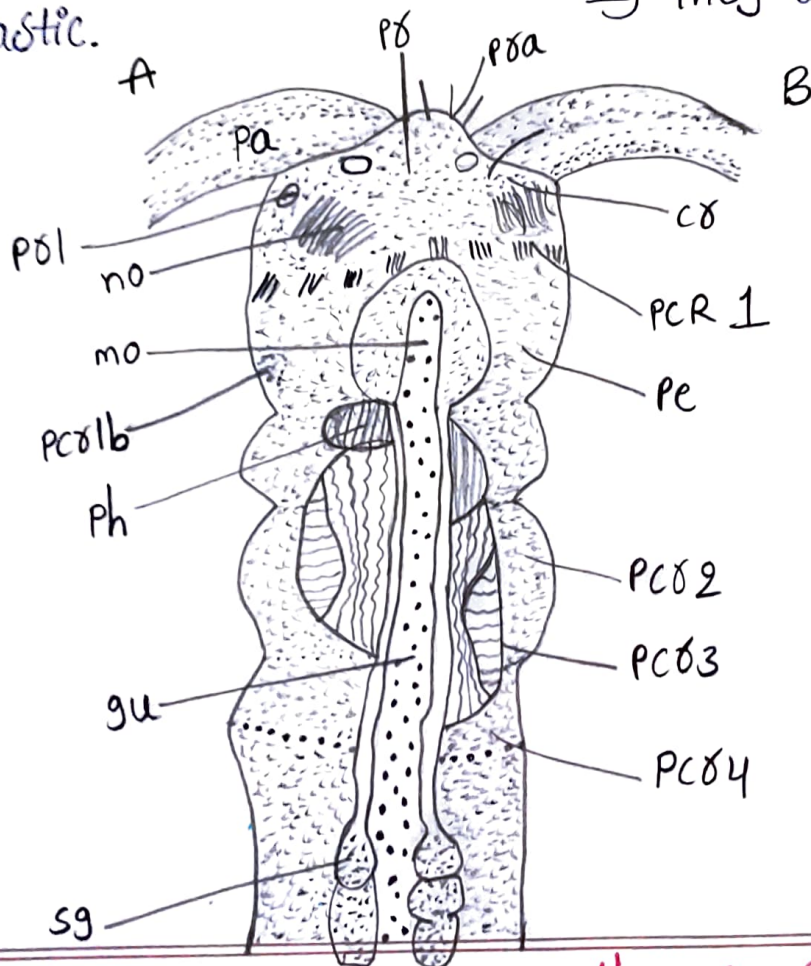
Family — Protodrilidae

order — Canalipalpata

Genus — Protodrilus

Species — Protodrilus adhaerens

⇒ They have a long and segmented body. ⇒ They are triploblastic.
⇒ They are coelomate.



Protodrilus adhaerens

Phylum :- Arthropoda :-

① Limulus classification :-

Phylum — Arthropoda

King dom — Animalia

class — Mesostomata

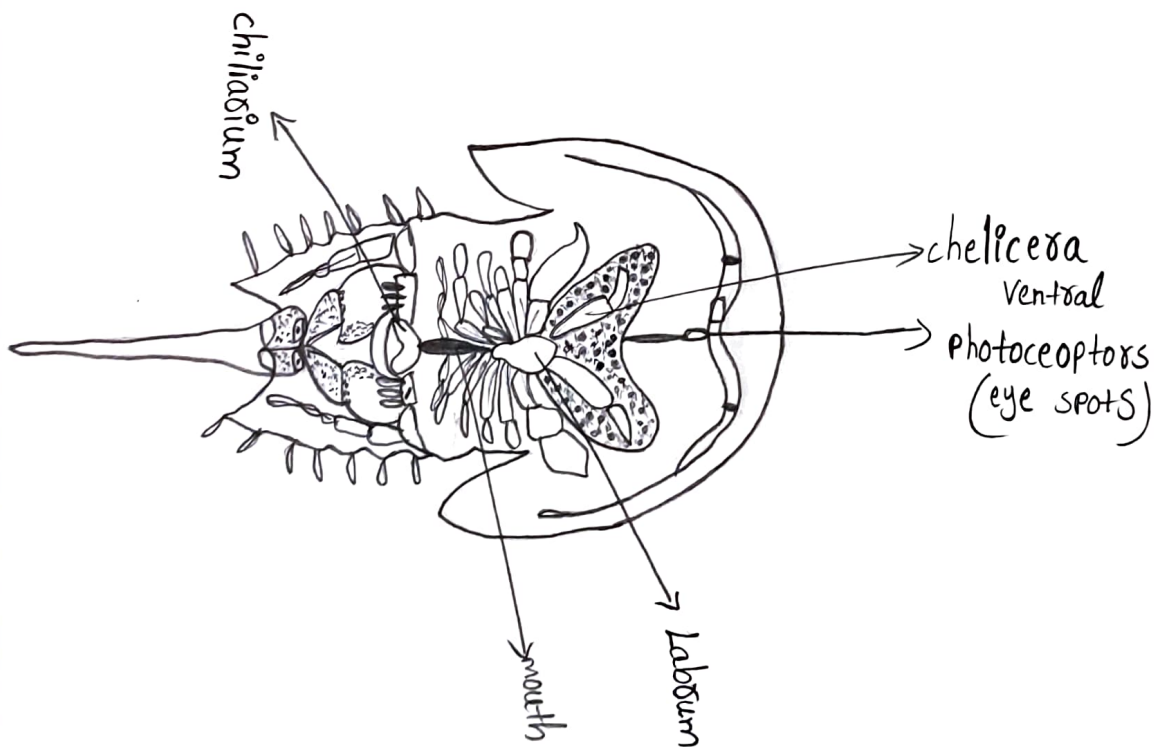
Family — Limulidae

order — xiphosura

Genus — Limulus

Species — Limulus polyphemus

⇒ Limulus polyphemus can be maintained a wide variety of systems & from fiberglass tanks with various types of biological filtration. ⇒ common disease is epizootic shell disease.



Limulus polyphemus

Phylum - Arthropoda :-

Species classification :-

King dom :- Animalia

Phylum :- Arthropoda

Class :- Diplopoda

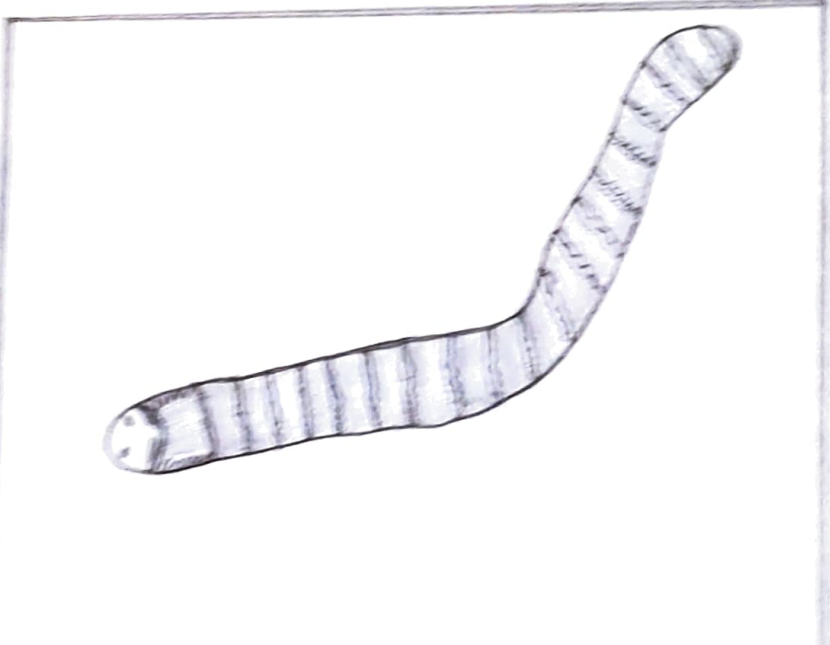
Family :- Spirobolidae

Order :- Spirobolida

Genus :- Spirobolus

Species :- Spirobolus cœvristriatus

⇒ Spirobolus is a family of millipeds in the order of Spirobolida. ⇒ which is represented by diverse organism having simple cellular organization. Having a septate body



Spirobolus cœvristriatus

8) Phylum :- Mollusca :-

1) Nautilus classification :-

King dom :- Animalia

Phylum :- Mollusca

class :- Cephalopoda

order :- Nautilida

Family :- Nautilidae

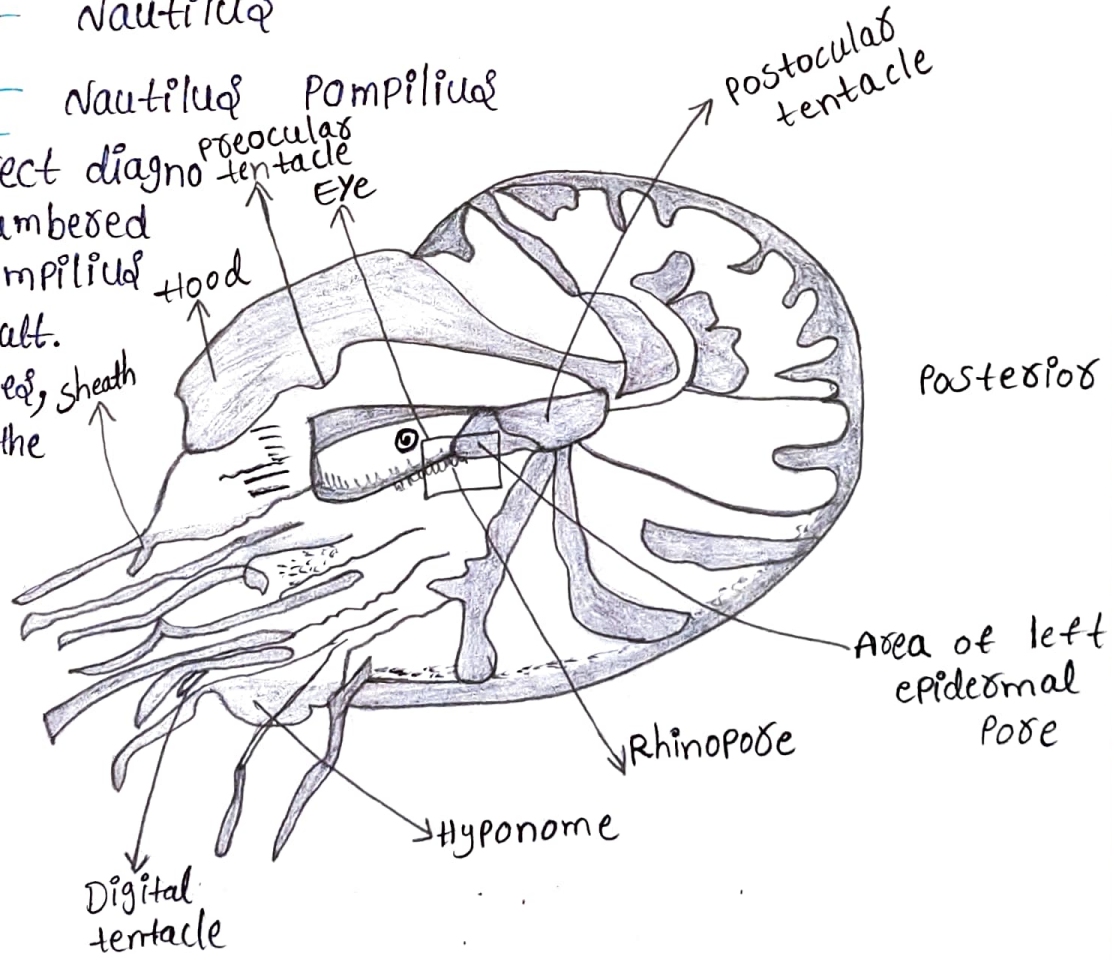
Genus :- Nautilus

Species :- Nautilus pompilius

⇒ The correct diagnosis in chambered Nautilus pompilius are difficult.

⇒ The tentacles, sheath ventral to the hood.

Anterior



Nautilus pompilius

① Phylum - Echinodermata :-

① Cnidoid classification :-

King dom :- Animalia

Phylum :- Echinodermata

class :- Cnidaria

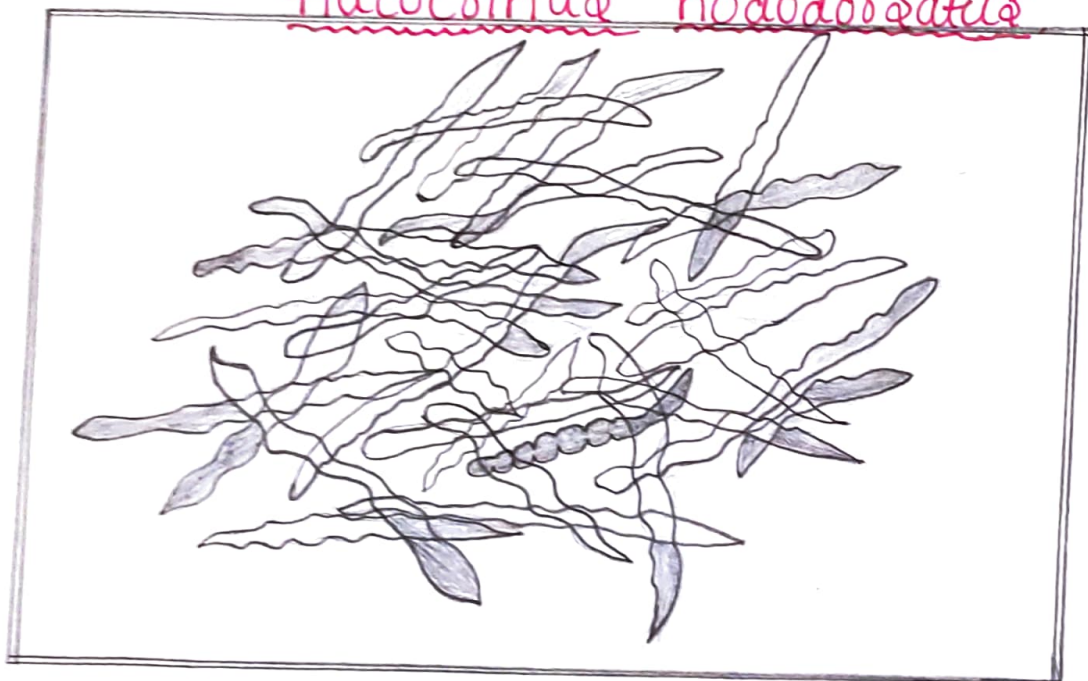
Order :- Echinoderm

Family :- Actinocyathidae

Genus :- Acanthina

Species :- Acanthina nodosata

Acanthina nodosata



⇒ Acanthina is an cowpox is an infectious disease caused by the cowpox virus.

⇒ It is a bacterial disease. caused by Actinomyces.

⇒ Ring worm is a skin infection by mold like fungi.

and nails.

① Phylum - Echinodermata

② sea cucumbers classification

King dom :- Animalia

Phylum :- Echinodermata

class :- Holothuroidea

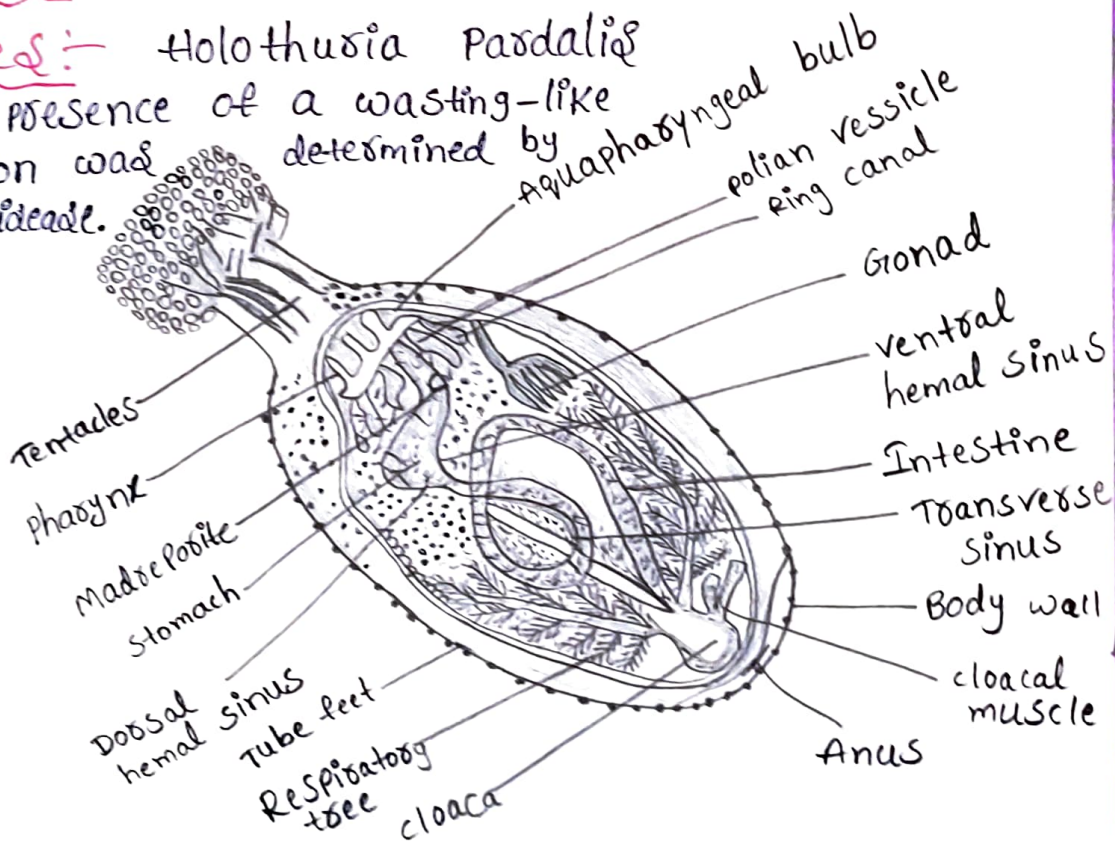
order :- Aspidochirota

Family :- Holothuriidae

Genus :- Holothuria

Species :- Holothuria Paddali

⇒ The presence of a wasting-like condition was determined by gross disease.



Holothuria Paddali