

Murex Purpurea A Mollusc

ABSTRACT: (Ref Report of 14th SSMS pg 58)

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The knowledge of zoology, botany and chemistry is very important to study the sources. The already existing classification of the natural world systematized on the basis of evolutionary history and anatomical as well as physiological similarity, is a useful guide to understanding the characteristics of each group of sources. With a plethora of information coming in, one can get lost or confused without a clear classification. In the process of studying *Murex-purpurea*, we will follow the taxonomic classification and will study

the characteristic of each subclass related to our drug.

Have you ever just looked out at the ocean and wondered what all lives in it?

The ocean and it's animals cover more than 75% of the Earth's surface. The ocean is filled with thousands of types of animals.

So get out your snorkel and swimsuit and take a dive into the deep ocean with me.

CLASSIFICATION OF ANIMALS WITHOUT BACKBONE (NON-CHORDATA)

Phyllum Porifera	Multicellular, corals, marine, sessile	<i>Badiaga, Spongia-tosta</i>
Phyllum Coelenterata	Marine, cylindrical, cavity, inside	<i>Medusa, Corallium-rubrum</i>
Phyllum Annelida	Segmented body, cylindrical	<i>Medusa, Corallium-rubrum</i>
Phyllum Mollusca	Aquatic, marine, body-soft, unsegmented, enclosed in fleshy mantle - secrete calcium, carbonate, shell around the body.	<i>Sepia, Murex, Helix</i>
Phyllum Ichinodermata	Marine, body covered with thick calcareous spiny exoskeleton	<i>Asterias-rubens</i>
Phyllum Arthropoda	Segment with joint appendages. Distinct division in to head, thorax and abdomen. Crustaceae, Insecta, Arachnida, Myriapoda.	<i>Aranea-diadema, Tarentula - h, Tarentula - c</i>

INTRODUCTION TO MOLLUSCS

The name "Mollusc" is derived from the Latin word "mollis" which means soft. (Latin is the language scientists use to talk about things in nature.) Scientists classify them as an invertebrate, which is just a big name for a group of animals without backbone.

- Aquatic animals, mostly Marine.
- Body is soft, non segmented and enclosed in fleshy mantle that secretes calcium carbonate, forming a shell around the body.
- Well developed head, that has a mouth and nervous/sensory functions.
- Attached to the head is a foot which is used for

movement.

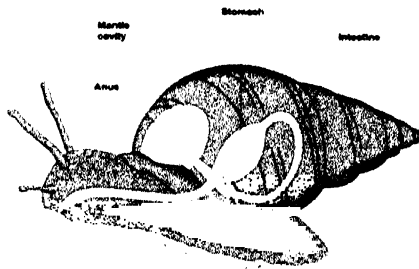
- In snails the shell has a horny layer called periostracum.
- Shells decay slowly and fossilize well, so the phylum has excellent records.
- Complicated digestive system, with the anus opening into the mantle cavity.
- The radula is usually toothed and very complex.
- Open circulatory system that has a heart, blood vessels and resp pigments.
- Breathing is done by gills, lungs or the surface of the body.
- Excretion is done by the kidneys that pump waste into the mantle cavity.

Scientists have taken large group (known as a Phylum), the molluscs, and have divided into seven classes. Molluscs within each Class have body features that are similar to each other. This

class is then further divided into families once again according to their similarities.

Molluscs have learned to survive in almost all the areas of the world.

- The aquatic molluscs live in water. They live in the salty oceans from the intertidal areas (that area where waves and tides wash in and out) to the deepest parts, called trenches.
- Many live in fresh water areas such as lakes and streams.
- The terrestrial molluscs live on land. Some live under rotting leaves or logs. Others live high up in the trees. Some live on mountains, others in deserts.
- Some of the molluscs have even evolved to become molluscs without a shell. They too, live in the oceans and on land. You may know some of these shells as the slugs and the ones living in the oceans as sea butterflies or sea slugs.



Phylum Mollusca

Snails, Clams, Squid

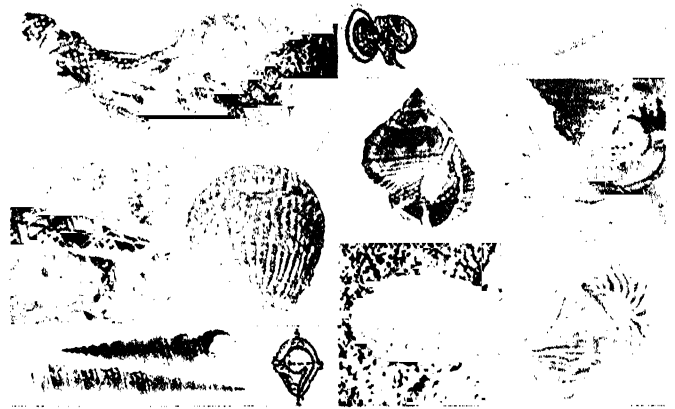
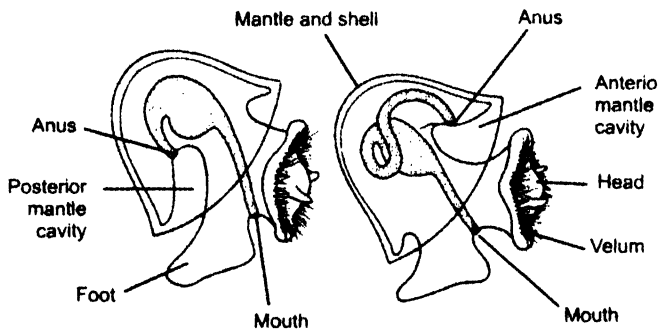


Body covered by shell, has muscular foot

CLASS

Aplacophora	No Shell	
Polyplacophora	Shell with 8 separating Plates	
Monoplacophora	One Plate	
Gastropoda	Stomach + foot single shelled	<i>Helix-aspersa, Helix-pomatia, Helix-tosta, Murex-purpura, Patella-vulgata</i>
Cephalopoda	Head + foot Shell less	<i>Sepia</i>
Bivalvia	Hatchet + foot Double shell	<i>Calcarea-calcinata, Pecten-jacob, Conchiolum, Mytilus-edulis</i>
Scaphopoda	Live with head down in mud with many ribs	

CLASS: GASTROPODA



Scavenger Predator 90,000 species

SUB-CLASS

According to the traditional classification there are four subclasses:

- Prosobranchia (gills in front of the heart)
- Opisthobranchia (gills to the right and behind the heart)
- Gymnomorpha (No shell)
- Pulmonata (lungs instead of gills)

According to newer classification there are

only two subclasses:

- Eogastropoda (Prosobranchia)
 - Orthogastropoda (Opisthobranchia, Pulmonata)
 - o Fragile shell or no shell
 - o Breath through gills or absorbs O₂ directly from the water through a special membrane lining the mantle cavity.
- Colorful body

PART	STRUCTURE	FUNCTION
HEAD	Well developed, bearing eyes and tentacles	
FOOT	Broad tapered muscular	Secretes mucus Works by making ripples to allow Gastropods to glide
STOMACH	Well developed GI System	Walks on stomach
RADULA	A strap like tongue with a row of teeth on it	Moving food to back of mouth row of teeth on it and cutting plant material To bore hole in the shell of other mollusc to get food.
MANTLE	Strong outer organ - In shell less slugs	Deposits the shell by forming calcium carbonate crystals in layered construction. Respiration in mantle cavity with gills
SHELL	Hollow No subdivision on its interior One shell	Fully retreat into shell through roundish opening which is covered by a lid.

Taxonomic Classification of Orthogastropoda

Class	Gastropoda
Subclass	Orthogastropoda
Super - order	Caenogastropoda
Order	Sorbeococoncha
Sub - order	Hypogastropoda
Infra - order	Neogastropoda
Super Family	Muricoidea Rafinesque
Family	Muricidae
Sub Family	Muricinae
Genera	Murex

FAMILY: MURICIDAE

- Common Name: Murex snails, rock snails
- Oldest classical names first used by Aristotle.
- Species: Known 1,000
- Shell: Look attractive ornamented with knobs, tubercles, ribbing or spines.
- Growth: Episodic grows in spurts remaining the same size for a while before rapidly growing to the next size stage. Varices develop with the growth.
- Life habits: Carnivores
- Feeding on other gastropods, bivalves, barnacles.
- Reproduction: Lay egg capsules from which the young snails hatch.

GENERA: MUREX

- COMMON NAME - Royal Purple, Tyrian Purple
- SPECIES - 500
- SHELLS - Sculptured with spines or fronds
 - Inner surface brightly coloured
 - 10-15 cm in length

- Delicate webbing
- DISTRIBUTION- Indo-Pacific ocean, Mediterranean sea and adriatic sea
- HABITAT - Rocks, corals, mud and sand.
 - Life habit - Carnivorous or Scavengers.
- COLOUR OF SECRETION - Purple exactly like of "clotted blood"
- Blackish hue to the sight
- Shinning when held to light
- When exposed to sunlight purple colour changes to light green to deep green
- In few minutes to dull sea green
- In few minutes to blue to purple red
- After 1-2 hrs - Very deep purple red

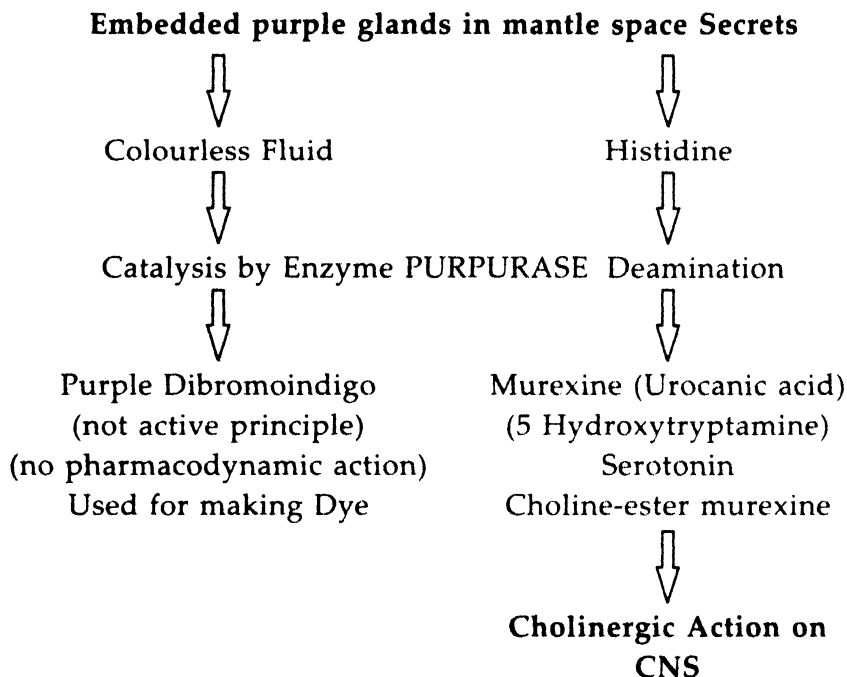
HISTORY

- In 1600 BC - Dye was used by people of TYRE in Phoenicia (Now Lebanon)
- Purple pigment was obtained from - *Murex-brandaris*, *Murex-trunculus*, *Purpuro-lapilus*
- 10,000 Muricids - 1 gm of Dye
- Tyrian Purple- A luxury Dye of ancient world was a symbol of
 - Royalty, Majesty, Status, Born to purple, being destined for leadership.
- In Babylon- Idols were clothed in Tyrian purple cloth
- Rom's Emperor NERO was the only person in the empire allowed to wear tyrian purple cloth
- In 400 AD - Murex-shells become scarced due to huge demand and over harvesting for Romans
- Codices of Byzantium was written with Purple Ink
- 1453- Decline of Roman Empire (Constantinople) - Use of dye declined
 - Dye replaced by cheaper dye - lichen purple and madder

3 METHODS TO REACH THE SOFT ANIMAL WITHIN

Secretion for making holes into shells - "Gliding" ⇒ Drilling holes ⇒ Wedging to open a shell
 As the teeth grind the shell of the prey another organ secretes a fluid that slowly dissolves the calcium carbonate of the shell. ↺
 This process takes 20 -150 hrs.

CHEMICAL ACTION



PERIPHERY OF SMOOTH MUSCLES

PATHOGNOMIC EFFECT

Develop within 30 minutes after ingestion of offending Mollusc. Paraesthesia - Tingling, Burning, Numbness is first noted on mouth, lips, tongue and then spread over scalp, neck, fingertips, toes.

- Dizziness
- Tightness in throat
- Chest pain on deep inspiration
- Weakness
- Malaise
- Headache
- Increased salivation
- Increased perspiration

- Thirst, nausea, vomiting
- Pulse - thready, rapid
- Reflexes - Superficial R - Absent
Deep R - Decreased

SEVERE POISONING: Intoxication, ataxia, incoherent speech, aphonia

PROGNOSIS : Good: If Victim survives first 10-12 hrs

Death: If muscular weakness and respiratory distress grow progressively more severe during first 8 hours

CAUSE OF DEATH: Respiratory Paralysis

PROVER: 1841 - PETROZ - On 3 female provers -

daily dose in 4 x for 5-7 days. RUSHMORE - On 1 female prover - in 3rd Trituration Twice daily for 6 days.

1852 - HERING - On 3 female prover - in 200 dilution 3 doses at interval of 10 days

PREPARATION: Triturations of the desiccated liquid which is contained in a sac near the neck of the animal.

STUDY OF LITERATURE FROM SOURCE BOOKS

- Encyclopedia of Pure Materia Medica, Vol 6 by Allen TF.
- The Guiding Symptoms of our Materia Medica by Hering C.
- Cyclopedia of Drug Pathogenesis Vol 3 by Hughes R.

CHARACTERISTIC PARTICULARS AND PATHOGNOMIC SYMPTOMS

LOCATION	SENSATION	MODALITY	ACCOMPANIMENT
Head	Confusion with unfitness for Labor Dullness	< Morning, on awakening > On rising	Inclination to Sleep
Occiput O - Acute	Cramp like squeezing	> Putting hand upon it > Head throwing backwards	
Lt Temple	Pain		
Forehead and Rt Temple	Aching	< Noises in ears	
Ear Behind	Cramp like squeezing Noise		
Larynx ↓ Chest	Voice hoarse Cough -dry, hard with oppression of chest Wheezing Dyspnoea	< Morning, while fasting or before break-fast < Breathing < Evening	
Abdomen ↓ Vagina Rt Hypo Lt Hypo ↓ Whole abdomen O - Acute	Pain Sensation of weight Tensive pain Colic, sharp as from a cutting blow Sinking sensation	< Throughout evening	
Abdomen Groin ↓ Socket of Rt Hip With Bowels	Distress as at the approach of menses Sharp pains Great sensitiveness Enlargement	< Night	Anguish
Rectum	Sensation of weight Difficult evacuation		

D- more than 5 days	Constipation		
GUT	Polyuria Constant urge to urinate Foetid urine like valerian with white sediment Discharge of small quantity of mucus Blood in urine	< Day-time < After urination < Night	
Heart and Pulse	Palpitation Throbbing of Arteries		
Breasts O- Acute	Violent pains Lancinations		
Uterus ↓ Breasts O- Acute Diagonal Pains Cervix	Prolapse Bearing down pains Elongated	< BM < Lying down > Legs tightly crossed	Unusual sexual excitement < Slightest touch Sensation of heavy pressure on the rectum Haemorrhoids Great fatigue
Lt Uterus From below upwards	Stitches		
Sacrum Chronic D- Several days	Aching Leucorrhoea green or Bloody Inflammation Induration ↓ Soreness Consciousness of Womb Dryness Constriction and pulsation Incisive as if caused by cutting instruments Feeling as if internal genitals being pushed out Carcinoma Dysmenorrhoea Profuse bleeding	< Sitting down > While walking	Great nausea Faintness Great depression of spirits Deep hypochondria

Rt Ovary ↓ Rt Chest Chronic	Soreness		
Lt Ovary Rectum Uterus ↓ Abdomen Vagina O- more than a year	Large Cyst Occupies space Occludes Distended Confine to her room and bed		
Labia Majora Cervix ↓ Rt Uterus → Abdomen Thorax	Sensation of weight Sensation of expansion Tumefaction with several deep fissures, ulceration Burning, Shooting, Stitching Pain Watery greenish irritating Leucorrhoea		
Perineum	Dragging Relaxation		
Hips, Loins → Thighs	Pains	< Exertion	

MIND - TYPE OF INDIVIDUAL

- Anxious
- Sensitive
- Lively
- Fearful
- Apprehension
- Nervous
- Affectionate

SYMPTOMS OF EMOTIONS

- Fear and dread for several days
- Great sadness
- Depression of spirit
- Hopelessly ill
- Gives up everything
- No strength left

SYMPTOMS OF INTELLECT

- Repugnance to conversation
- Compression of ideas
- Confused thoughts
- Memory weak
- Can't find correct words to express

MENTAL MODALITY

- < Evening
- < Ca Uterus
- < DM
- > Leucorrhoea

PHYSICAL GENERAL SENSATIONS

- Labor is irksome
- Extreme lassitude
- Excessive weariness in evening
- Little disposition to work
- Excessive desire for an embrace
- Debility of the whole muscular system
- Extreme feebleness of voluntary motions

PATIENT AS A PERSON

- **APPETITE** - Hunger during the day but not at dinner
- **CHEEKS**- Burning - Rt < evening, Lt < morning

- NOSE- Coldness all day
- SKIN- Dryness as if about to crack, hives.
- SEX- Nymphomania from least contact of parts
- MENSES- Flow- Too profuse for 10-12 days. Color- Russet, finally serous. Clots - Large coagule. Cycle- Every 2wks, for 2 days- scanty
 - BM- Severe labor like pains, Deep sadness, hopelessness, sexual desire increased
 - Beginning- All complaints > +++, wants to die, copious sweat
 - DM- Constriction in uterus, cries for hours. No Hysteria, pain in breasts, headache, impaired appetite, great debility, walking very difficult, constipation, sleep disturbed, dreams +++
- LEUCORRHOEA- Serous greenish, thick becoming sanguinous, reappears while at stool, < day-time, > night- time, alternates with mental symptoms

"HAPPIER WHEN LEUCORRHOEA IS WORSE AND VICE - VERSA"

PREGNANCY- Leucorrhoea, sensation of pelvic bone getting loose, walking difficult

CLIMAXIS- Too early, too profuse, strong sexual desire

SLEEP- Drowsiness with sadness at 3 PM, urgent inclination to sleep towards 9 PM, disturbed by pains (catamania), awakening with fright, with urgent want to make water and abundant emission

DREAMS - Distressing, awaken with a start in fear

"I fled from a stormy sea, and found myself again in a meadow with water"

PHYSICAL GENERAL MODALITY

- | | |
|---------------|----------------------------|
| < Least Touch | > Beginning of menses |
| < Sun | > Eating |
| < Sitting | > Waking in morning |
| < BM | > Stirring about (walking) |
| < DM | > Throwing head back |
| < Night | > Legs tightly crossed |
| < Lying Down | |

< Exertion

KEY-NOTE SYMPTOMS

Nervous, sensitive, affectionate women who are very tired, weak and run down

Climacteric sufferings

Diagonal pains - Ovary to opp Breast

Leucorrhoea yellow bloody alternates with mental symptoms

Violent sexual nymphomania from least contact with the parts

Bearing down pains must keep legs tightly crossed

SPHERE OF ACTION AND CLINICAL CONDITIONS

- Female sexual organ
- Rt Side
- Endocrine
- Abortion
- Breast- Pains, Benign tumours
- Climacteric affections
- Prolapse of Uterus
- Endometriosis, metritis
- Physometra
- Irritable uterus- Hysteralgia, Vaginismus
- Ca Uterus
- Cervical erosion
- Ovarian Cyst
- Pregnancy affections
- Dysmenorrhoea
- Leucorrhoea
- Diabetes insipidous
- Gerio- Psychosis
- Nymphomania
- Lumbago, coxalgia
- Migraine- Cephalalgia

ON EXAMINATION

- Soft Uterus
- Violet
- Enlargement of neck of Uterus
- Large excoriation on ant aspect
- Bleeding on slight touch
- Climaxis

EVOLUTIONARY ASPECT**MELANCHOLIC, SANGUINE AND LYMPHATIC, PALE FACE, THIN, DELICATE**

Infancy	Retrocession - Psoric trait Violent attack of cough by congestion to lung
12 - 18 Yrs	Dysmenorrhoea
13 Yrs	Polyurea
21 Yrs	Miscarriage 1st pregnancy
30 Yrs	Cough causes, Prolapse of uterus, Uterine affections, Ulceration cervix
Old Age	Geriopsychosis, Nymphomania

MIASM: SYCOSIS AND SYPHILIS**RELATIONSHIP**

Compare - Uterine congestion Cervical affection	<i>Sepia</i> (Passive sexual Erethism)
Uterus Shooting pain Prolapse Melancholy	<i>Aurum</i> - Induration
Nocturnal polyuria -	<i>Kreosote</i>
Sexual erethism	<i>Lil-tig</i> <i>Platina</i> <i>Orig</i>
Consciousness of womb	<i>Helonias</i> <i>Hydrophobinum</i>
> Throwing head back	<i>Senega</i>
Prolapsus uterus	<i>Sec</i> <i>Plat</i> <i>Aesculus hip</i> <i>Bell, Lil-tig, Nux-vom, Na-mur, Podo, Puls, Sepia</i>
Climacteric	<i>Sepia</i> <i>Sulphur</i>

SYMBOLISM**SNAIL**

- Traditional Lunar symbol for its appearance and disappearance.
- Cycle of death and rebirth represents the eternal home coming.
- Slowness and voluptuosness.
- Reservoirs of semen.

SPIRAL SHAPED SHELL

- Natural symbol of labyrinth
- Female and male sexual symbolism
- Analogy between Mollusc's substance, motion and excretion with those of vulva
- Birth symbol as marine animal comes out of its shell so is man born from the womb of his mother.

NJH DOKU



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This month's NJH-DOKU is based on the theme of marine Creatures. 9 Drug indications have been given. Figure them out and place them as indicated below to their specific numbers, in such a way that the drugs are not repeated in either of the columns or the rows.

THE INDICATIONS ARE

- 1) Aversion to sex (3)
- 2) Nymphomania (4)
- 3) Conversation aggravates (4)
- 4) Children late learning to walk (3)

- 5) Expectoration flies from the mouth (3)
- 6) Hair on lip (2,1)
- 7) Cancer of axilla (5)
- 8) Minute gun cough (3,1)
- 9) Asthma with goiter (5)

QUESTIONS

9		3	6		7		5
	5			4	2		
	4	1	8		5		
				3	1		
1			2			4	5
		2			6		7
			7			5	1
	1			2		7	6
6	7	9				3	8

Repertorization - Selective?

ABSTRACT: Here Dr Rastogi explains how useful it is to keep flipping the pager of the Repertory... as sure shot way to success.

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There is a misconception that repertorization is only required in chronic cases. In fact any repertory can be used to look up the remedies for a particular symptom and we can arrive at the similar remedy on making a further reference to the Materia Medica. This is very useful for quick prescribing. I have mentioned here some of the rubrics often used by me with advantage from the Boger-Boenninghausen Repertory.

AVERSION TO SCHOOL: *Cal-p, Nat-m*

CARELESS: *Caladium, Verat*

CAREFREE: *Ham -laur, Opium, Phos, Tarax, Zinc*

HIDING: *Ars, Bell, Cupr, Hell, Hyos, Puls*

HOPEFUL: *Acon, Calc, Sulph, Verat*

DREAMS AMOROUS (ref rep)

Joyous

Vexations

-of disappointed hope: *Ign*

-with distress and striving: *Rhus-tox, Cina*

SUCKING THE THUMB: *Cal-p, Nat-m, Sil, Cean, Cham, Merc, Nat-s, Sulph*

BITING NAILS: *Arum-t, Acon, Ars, Stram, Calc, Cina, Hura, Lyss, Nit-ac, Phos, Plb, Senec*

If we make a habitual use of the repertory, our familiarity with the given rubrics increases and this leads to better results.