



Sense and Sensibility in the Sea Remedies: The Sense of Touch

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Abstract: An exploration of the sense of touch in marine invertebrates in relation to the sensory symptoms of the corresponding homœopathic remedies. Adapted and abridged from *Sea Remedies, Evolution of the Senses*.

Keywords: *Acanthaster planci*, *Anthopleura xanthogrammica*, Arthropods, *Asterias rubens*, *Calcarea carbonica*, Cephalopods, *Chironex fleckeri*, *Cypraea eglantina*, Echinoderms, *Eledone*, evolution, *Homarus*, jellyfish, marine invertebrates, *Medusa*, Molluscs, *Murex*, *Nautilus*, octopus, *Onychoteuthis banksii*, *Pecten jacobaeus*, Porifera, sea anemone, sea remedies, senses, *Spongia tosta*, squid, starfish, touch, *Toxopneustes pileolus*, *Venus mercenaria*.

Sensory Evolution

Is the evolution of marine invertebrates' sensory structures reflected in the symptoms of the corresponding homœopathic remedies? Why do the excitable jellyfish remedies, like the mythical Medusa, easily lose their head? Why is it that a prover of the sea anemone remedy *Anthopleura xanthogrammica* felt she had a prehistoric brain? Does the apparently sessile sponge, from which we obtain *Spongia tosta*, cough when it senses an obstacle in its respiratory passages?

In an abridged extract from her forthcoming book, *Sea Remedies, Evolution of the Senses*, Jo Evans explores how the development of the sense of touch in sea creatures offers clues to the healing potential of animals such as the sponge, jellyfish, sea anemone, starfish, lobster and mollusc as homœopathic remedies.

The Sense of Touch

Aristotle believed that perception of touch was the most basic property of living organisms and that without this sense of contact, living beings would die. We do thrive on touch. Massaged babies gain weight 50% more easily than unmassaged babies and are better adapted to other sensory stimuli, such as noise.¹ In Aristotle's sensory physiology, a touch sent warm waves of impressions via the blood to the heart, and blood was the carrier of the soul.² We now have knowledge of the nervous system, and recognise that the sensation of touch occurs by means of chemical and electrical messages passed to conscious awareness by receptors in the skin; but there is something about Aristotle's proposal that still feels right, given a little

poetic licence. Touch and inner feeling are, as he suggested, inextricably bound up.

Our skin connects us to other and outside; to those we love, and to the elements of earth, water, air and fire. But it also protects us from the environment, to the best of its ability. Skin is the heaviest and visually the most expansive organ of the body; we rely on this sensitive barrier, stretching across all the curves and points of our skeletal structure, to help us gauge and respond to inner and outer weather fluctuations, whether emotional, mechanical, pathological or meteorological.

Skin without bone is quite another thing. If one watches footage of an octopus squeezing through an extremely narrow tube, there is the sense that this entirely boneless creature has become ectoplasm; it appears to liquidise and then re-form. Physically, invertebrates span all of this: from the degree of lability shown by the octopus, to the static limestone structures of coral reefs, thousands of years old. The reconciliation of softness and hardness occurs in the flaccid sea snail, hiding in its rigid shell.

For marine invertebrates, as with us, the skin is a form of physical defence, to feel pain and sense physical threat, as well as to find and engage with the pleasures of food, shelter and mates. The sense of touch arises from stimulation of nerves on the surfaces of the body: membrane, skin, hair, spine, scale, antennae and shell, and this stimulation may be from direct contact or from water pressure. For many of the early animals, perception of sensory stimulus other than touch also takes place by means of receptors dispersed across the body covering. Unlike our skin which senses pain, tactile stimulus,

1. Ackerman, Diane, 1990/2000, *A Natural History of the Senses*, Phoenix, Orion, UK, p.73
2. Siegel, Rudolph E, MD., 1970, *Galen on Sense Perception*, S Karger, NY and Basle, pp. 174-175.

heat and cold, they have skin that can taste and smell, hear, and perceive light and shadow.

Regeneration: Porifera (*Spongia tosta*, *Badiaga*)

Human skin renews itself every twenty-eight days. Impressive as this is, in the invertebrate world the ability to regenerate life and limb can be even more astonishing by comparison.

One of the earliest invertebrates, the sea sponge, possesses a remarkable ability to regenerate. When pulled apart, or even mashed up in a blender; a sea sponge can recover and re-grow; cells from the same species will even re-group. Archeocytes are the Ur-cells of the sponge. Known as omnipotent cells, they possess the ability to transform into any one of the sponge's specialised cells; in this, they are something like human stem cells. Stem cells are Ur-cells of the human body, still at a mutable stage. In a sponge, non-archeocyte cells can return to being archeocytes when they are required to perform a different function. Archeocytes in the sponge, and stem cells in humans, are able to adapt their end-function and turn into many different types of cell, which is why medical researchers are experimenting with stem cells to repair and replace diseased, traumatised and lost body tissues. Similarly, marine sponge extracts are being used to prevent organ rejection in human transplant operations.³

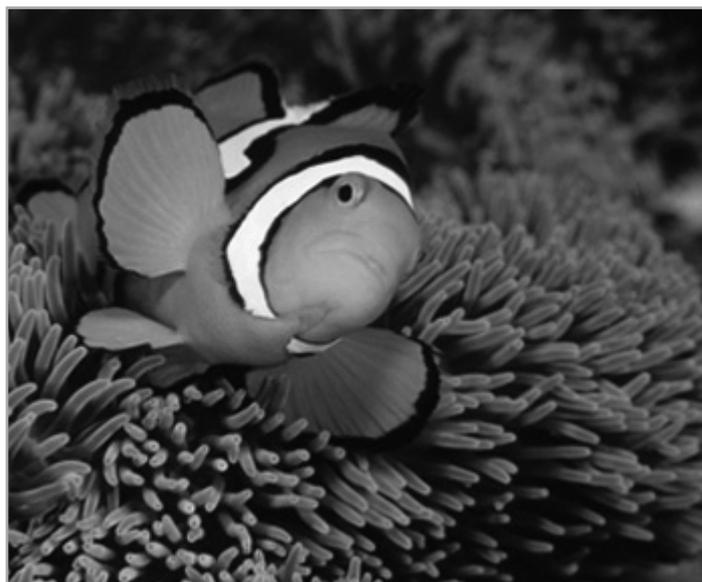
Sponges pass sensory messages by means of chemical signalling. No intracellular gaps or junctions have yet been found in sponges; these are present first in the Cnidarians (the hydra, jellyfish, coral and sea anemones) and onwards in evolution. Intracellular junctions allow electrical currents to be passed between cells. So, the sponge, a mass of cooperating cells, does not have a nervous system, but perhaps perplexingly it will contract its body on contact. Sponges live fixed in one place but they move their bodies in order to feed and breathe, partly by means of special contractile cells called myocytes, similar to smooth muscle cells.⁴ Pliny, writing in the 1st century AD, noted in his *Natural History* that sponges must possess intelligence, since they contracted when they sensed the presence of a sponge diver about to tear them from the rocks.⁵ Modern research bears this out:

“Although not explicitly muscular or neural, sponges exhibit coordinated contraction as well as coordinated cessation of pumping. Thus, a view of sponges as more active is replacing an older perception that held sponges to be virtually ‘inanimate.’”⁶

Marine biologists have likened the contractions of a sponge to a coughing mechanism, as this reaction serves to remove foreign bodies from the sponge's pores, the many channels through which they breathe, eat, excrete and reproduce. Correspondingly, one of *Spongia*'s main actions in homœopathic form is as a cough remedy; another strong feature of the remedy is the sensation of an internal plug or foreign body lodged inside.

The main sensations of the remedy *Spongia* include expansion and contraction; there is a sensation of swelling and bursting, with the opposite feelings of cramping, contraction and tightness. This is comparable to the pumping action and contractile behaviour of the sponge in nature. These

sensations are generally felt in association with the glands and respiratory system, but can also occur in the circulatory system. In general, the *Spongia* patient is highly sensitive to touch, which they find aggravates them greatly; such is their sensitivity, they even experience the sensation as if they are being touched when not.



Sea Anemone

All sense and no brain: Cnidarians (jellyfish, coral and sea anemones)

Although Cnidarians, such as jellyfish, do not have a brain, the decentralised nerve net sends messages all over the body via the sensory lappets (touch-sensing organs) located in the control centres for their senses, called the rhopalia. The rhopalia also house light detectors (ocelli), balance detectors (statocysts) and receptors for smelling and tasting chemicals in the water. The nervous system (simple neurons with several axon-like processes) operates slowly because every signal has to pass through the whole circuit of neurons, as opposed to a few neurons with long axons. Every reaction to stimulus is felt as a whole-body experience. Since the jellyfish has no brain, it is subject to tropisms: whole-body reactions.

Patients benefiting from remedies in this group will be highly sensitive emotionally and have a tendency to overreact. Like the mythological Medusa, whose name and story is bound up with this animal phylum, they metaphorically lose their head. A participant in the proving of the giant green sea anemone, *Anthopleura xanthogammica*, unaware of the proving substance, reported: “It’s as if I just respond to impulse.” There was a feeling of pretending to be human, “when every cell in my body wanted to stay on my level, low plane, by myself.” One prover reported feeling as if she had a prehistoric brain. There is a strong affinity with the muscular and neurological systems in this remedy group.

In the homœopathic remedies made from jellyfish, coral and sea anemones, a common sensation is a feeling as if there is a distortion of the limbs. In several remedies belonging to this family, the size of the limbs is felt to be distorted, in others there is a sensation of amputation or dislocation. Provers

3. Jacobs et al., 2007, Evolution of sensory structures in basal metazoan, *Integr. Comp. Biol.*; 47: pp. 712-723.

4. Ibid

5. Pliny the Elder, transl. John F Healy. 1991, *Natural History*, a selection, Penguin Classics, p. 139.

6. Jacobs et al., 2007, Op cit.

experienced the sensation as if their bodies were made of jelly, and as if the spinal cord were broken.

Characteristic pains of this remedy group are electrical tingling, pins and needles, numbness, burning and stinging, stabbing and pulsating; these may be accompanied by oedema and neuromuscular symptoms affecting the limbs and heart muscle. The sensations correspond with those of being stung by a member of this class of animals, particularly jellyfish.

The all-important stinging cells, cnidocytes, of these animals are innervated, able to respond to touch and stimulation. Sensory cells have been found to be concentrated at the base and tips of tentacles. However many tentacles a jellyfish possesses (typically eight in a Scyphozoa such as Medusa, and four in Cubozoa, such as *Chironex fleckeri*, box jellyfish) each tentacle alternates with a rhopalium (sensory control centre). This has led to discussion as to whether tentacles could be classed as actual sense organs, or if they are purely sense-bearing structures.

Genetic research in the field of evolutionary biology appears to support the idea that there is a link between the appendages, or limbs, and sensory function. Sensory organs are found around the joints on the limbs of animals earlier in evolution, just as the jellyfish has a sensory organ between each tentacle, and the fly hears with organs located at the joints of its legs.



Red Knobbed Starfish

Headless and legless: Echinoderms (*Asterias rubens*, *Acanthaster planci*, *Toxopneustes pileolus*)

In the echinoderm phylum – starfish, sea urchins, sea cucumbers – regeneration of life and limb is not limited to the starfish's ability to regrow arms. In a process called autotomy, sea cucumbers can cast off body parts at will. A sea cucumber of the genus *Thyone* has the ability to eject its intestines when under attack, thereby offering an amuse bouche to its assailant. After being nibbled on, it gathers back the remains of its gnawed guts and regenerates any lost parts. The various species of sea cucumber can either blow out their entrails or break apart their skin, releasing the intestines and other organs, all of which will grow back. There isn't yet

a homœopathic medicine made from the sea cucumber, but perhaps there ought to be.

Among echinoderms, all starfish can grow back lost arms, but the *Linckia* starfish can grow a completely new body from one detached arm. Other marine invertebrates with the power to grow back detached limbs are lobsters, crabs, and some species of octopus. In these cases, the lost body part again provides a replacement snack for a predator, allowing the damaged animal to escape and regenerate. Although we cannot regenerate lost limbs, the human equivalent of these regenerative powers is, again, the stem cell.⁷

The starfish, possessing radial symmetry, has a ring canal system of nerves running around its mouth, and extending along its arms. The arms are central to action and motivation, being the bearers of many sensory messages: smell, taste, light, a tactile sense, and mechanoreception.

It is thought that one arm can become dominant at any time. This means that the centre of control may change at any time, being juggled from arm to arm according to circumstance, and that once one arm is dominant, all the others must cooperate. This is a key factor in survival, hunting and mating. The arm that first senses an enticing odour of food or mate, and moves towards it, will take charge. And, if one arm is cut off, since no one arm permanently dominates, the other arms can easily cope while the new arm grows back. Starfish effectively have the potential to possess as many primitive brains as they have arms, although they use only one 'brain' or arm at a time.

Unlike the Cnidarian group, whose tentacles are generally passive receptors, starfish have a more sophisticated nervous system and muscular control, allowing them to manipulate objects and move in a more complex and deliberate manner. Beginning with the starfish, these are more like limbs as we know them.

In the homœopathic remedies of the Echinoderm family, one finds a cluster of unusual symptoms relating to the limbs, fingers and toes. A patient in need of *Asterias rubens*, the remedy made from the common red starfish, may experience the strange sensation as if one leg is too long, or as if one leg is shorter; there may even be the sensation that one leg is growing. Redness, blistering, itching, and burning of the toes, and gout affecting the big toe are characteristic symptoms. Neurological symptoms include numbness, burning and stabbing pains, stumbling and lameness, as well as contraction of muscles and tendons.

The *Acanthaster planci* patient (crown of thorns starfish) experiences the symptoms of cracked soles and fingertips, blistered feet, and ulceration of the extremities. Neurological symptoms include numbness of the fingertips, generalised burning and stabbing pains, and a sensation of general expansion and tension in the body.

The *Toxopneustes pileolus* patient (flower urchin) experiences heat in the big toe, cold extremities, swollen feet and pain in the small joints. Neurological symptoms include a general feeling of muscular weakness, sensation as if being pulled downwards, stabbing and burning pains, and generalised numbness.

7. Crump, Marty, 2005, *Headless Males Make Great Lovers & Other Unusual Natural Histories*, The University of Chicago Press, Chicago and London, pp. 115-119.

8. Stott, Rebecca, 2004, *Oyster*, Reaktion Books Ltd, UK.

Fittingly for a many-armed creature, the best word to describe the psychological profile of the *Asterias rubens* patient is touchy; they are ultrasensitive to criticism and easily irritated. They may live in fear of having a stroke, and feel as if their head will burst. The *Acanthaster planci* patient has the sensation of an abscess in the brain, which is imagined as rotting and dissolving. *Toxopneustes pileolus*, the flower urchin, in the same family, has the sensation as if something is loose in the brain and a general feeling of sensory confusion.

Clam up: Bivalves (*Calcarea carbonica*, *Pecten*, *Venus*) and Gastropods (*Cypraea*, *Murex*)

In bivalves, such as the oyster or the clam, the nervous system is less centralised than in other molluscs. The most developed sensory structures for the bivalves are found on parts exposed to the exterior environment, such as the edge of the mantle and the tentacles or cilia of the siphons. Here light and touch or vibrations can be perceived, sending the message to close or open the valves of the shell. So sensitive is the oyster's sensory system, oyster dredgers report that a bed of oysters will close from the first hint of the shadow of a boat passing overhead.⁸

In gastropods, paired ganglia (knotted masses of nerve cell bodies that collectively function as the central nervous system) enable the functions of eating, moving and protection. These serve the oesophagus, the foot and the muscles used to close the shell. In effect the gastropod has eight, simple paired brains which coordinate specialised functions.

As remedies, the bivalve and gastropod molluscs' psychological profile reveals a tendency to wall off and hide, due to their oversensitive natures. They retreat into their shells, or clam up, closing the valves. Some of the characteristic physical sensations of the remedy group are compression, tightness, constriction. *Murex*, Tyrian purple dye from the spiky, whorled shell, *Cypraea eglantina*, the dog rose cowrie, and *Venus mercenaria*, the clam, all feel strongly aggravated by being touched.

These mollusc remedies may also experience numbness, or loss of sensation in the limbs, *Venus mercenaria* being most representative of this sensation. More common is the feeling of inner detachment and dissociation, and a notable absence of emotional feeling. In *Cypraea eglantina*, this can be expressed as a physical sensation of icy coldness as well as on the emotional level.

Since polarity is always a feature of any remedy, it should be noted that this group of remedies has a great capacity to love, and desires to be loved. However, past disappointments in love, and the deep scars that remain, often result in self-imposed isolation and emotional walling off. Generally, in this group of calcium-dependent animals, the remedy portraits reveal a sensation of weakness of the musculoskeletal system, with a feeling in particular that the bones are weak or crumbling. Just as there may be ambivalence about being open or closed emotionally, there may be double-sided physical symptoms. A proverb of *Cypraea eglantina* experienced the sensation as if her body were divided: soft on the left side and hard on the right. And in connection with being fully in touch with what

is 'self' and what is 'other', *Calcarea carbonica* and *Cypraea eglantina* both experience the interesting symptom "mixes subjective and objective".



Lobster

Sensors on stalks: Arthropods (*Homarus*, *Limulus*)

The lobster does not officially have a brain, but a massed collection of ganglia, connected to the ventral ganglia, running the length of the body, under the abdomen. In its symmetrical body system, each segment of the body is served by a ganglion which is paired or mirrored on the other side of the body. Touch is sensed via the antennae and the tiny hairs that cover the whole of the shell; these are visible in close-up images. While they are touching, lobsters often simultaneously taste and smell the environment. One can see the evolutionary link between appendages and the senses; not just that of taste but sight too:

"In every fishmonger's shop we may see that the eyes of a lobster are carried on pedicles; and when the lobster casts off its shell, the outer coat of each eye, being continuous with the epidermis of its pedicle, is thrown off along with the rest of the exoskeleton. This pedicle, which gives the name of stalk-eyed Crustacea to a large group, is, strange as it may seem, a transformed limb."⁹

And, while the lobster's claws aren't jaws (the jaw did not evolve until the appearance of vertebrates) they do have teeth-like structures on them. Lobsters, like starfish, can also voluntarily lose a limb and regenerate it as an alternative to greater injury.

The main sensation of remedies made from those animals with armoured shells, the arthropoda, *Homarus* the lobster, and *Limulus* the horseshoe crab, is a feeling of over-fullness and cramping. A correspondence with the lives of the animals can be seen in the repeated growth and moulting cycles these animals endure as they grow too big for their shell. Lobsters in nature fight aggressively to maintain their territory, and will seek small hiding places when moulting. A *Homarus* case revealed that the patient felt distinctly uneasy in large rooms and spacious houses, preferring small, enclosed places.¹⁰

The *Homarus* patient has the sensation as if he or she suddenly cannot move and *Limulus* the feeling of being somehow

9. Herbert Spencer, 1864, Principles of Biology, Vol II, London, p303, quoted by Jaworski, Helan, 1963, Fishes, Cestaceans, Bryozoa, their Significance, British Homeopathic Journal, 52(1): Pages 58-69.

10. Evans, Jo, 2009, Sea Remedies, Evolution of the Senses, Emryss, p.330, case by Maurizio Italiano MD.

11. Hanlon, Roger T. and Messenger, John B., 1996, Cephalopod Behaviour, Cambridge University Press.

12. Nixon, Marion and Young, John Zachary 2003, The Brains and Lives of Cephalopods, UP.

possessed or taken over. Skin symptoms of both are sensations of burning, smarting and itching. Neurologically, *Limulus* experiences numbness of the soles of the feet, and *Homarus* has tingling pins-and-needles sensations generally.

Tentacular cephalopods (*Sepia*, *Onychoteuthis banksii*, *Eledone*, *Nautilus*)

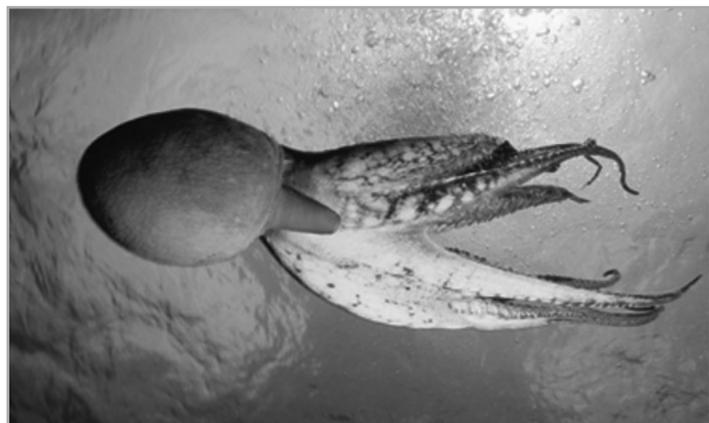
It seems the marine invertebrates find many uses for limbs: as brains, carriers of sense organs, and even as adaptable sexual organs. A cephalopod – cuttlefish, squid, octopus or nautilus – has the ability to modify a tentacle to become a penis or sperm depositor.

Cephalopods' sense of touch is perceived by means of mechanoreceptors, the lateral line analogue and pressure receptors.¹¹ Mechanoreception takes place in the statocysts (paired balance and vibration sensing organs situated in the cartilage near the brain), and these provide information about gravity and acceleration, allowing for orientation, and stimulating necessary body adjustments to maintain balance and direction.

A statocyst is comparable to the human inner ear, as surgical removal or destruction results in dizziness and disorientation as well as visual disturbances. In decapods – crustaceans such as lobster, prawn and crab, having ten legs – there are three maculae [part of the statocyst which indicates changes in gravity and linear acceleration] in each statocyst, while in the octopus there is only one.

An octopus has about 240 suckers per arm, the most of all the cephalopods, and these have sensory functions in smelling and tasting objects while touching.¹² Smelling, tasting, feeling textures, and using their well-developed eyes would appear to be the strongest senses for the octopus. Octopuses may be observed continually picking up small objects, placing them under the spaces between the arms, moving them towards the mouth and then quite often discarding them; they sample items by taste and touch combined.¹³

Though it has eight limbs, the octopus is thought to have a poor sense of proprioception, probably due to the single statocyst, though perhaps also a result of its neurological wiring. This



Octopus

means it lacks fine coordination when it comes to having a clear simultaneous sense of all the parts of its body in motion, and lacks a clear understanding of the weight, shape and size of the objects it is touching.

While some sources explain that the octopus has difficulties with three-dimensional coordination,¹⁴ other experiments have shown that an octopus can learn quickly, visually discriminate between objects, and display a memory for learning that remains for several days after a test has been completed.¹⁵ Octopuses are thought to be able to clearly perceive variations in texture and to know when and where a limb is stretching.

In the proving of the remedy *Eledone cirrhosa*, lesser octopus, there is a sense of intense physical activity, coupled with dreams of travelling and motion. The dreams are characterised by lagging behind, motor accidents, losing one's way, labyrinths, driving backwards perilously by car, and being in the dark while driving dangerously. This repeated theme of fast motion, of being uncoordinated, and unable to navigate or keep up in situations where lack of these skills will result in danger or accidents, corresponds with the octopus' under-developed sense of proprioception in nature. The image of a tangle of uncoordinated tentacles, moving perilously in a dark cloud of ink, emerges.

Other cephalopods, *Sepia*, the cuttlefish remedy, *Nautilus*, and *Onychoteuthis banksii*, the squid remedy, also experience the sensation of clumsiness and lack of coordination.

Hanlon and Messenger, in their analysis of cephalopod behaviour, note that in octopuses the nervous system of the arms contain more neurons than the whole of the central brain and appears to be curiously divorced from the rest of the brain: "Many of the arms' actions are performed without reference to the brain."¹⁶ As with the starfish, the arms appear to have a life of their own.

Cuttlefish and squid achieve a sense of three-dimensional perception by means of a primitive version of the mechanoreceptive lateral lines, found first in fish and amphibians.¹⁷ In fish the lateral lines, running the length of their bodies on both sides, sense movement and vibration in the environment by means of hair-like structures suspended in jelly, again, similar to our inner ear. Electrical impulses and magnetic fields can also be sensed through the lateral lines. The lateral line allows for an accurate perception of three-dimensional objects in water, whether moving or static, and is the means by which fish perform the aquatic ballet of shoaling.

Squid, octopus and cuttlefish all have touch and pressure receptors but not much is known about general pressure sensitivity in cephalopods. An octopus can withstand enormous atmospheric pressure as it has neither bones nor swim bladder. Knight-Jones and Morgan (1966) state that juvenile *Loligo forbesi* moves upwards in response to increased pressure as does *Nautilus* (Jordan, Chamberlain & Chamberlaine, 1988).

13. Wells, MJ., 1962, Taste by Touch: Some Experiments with Octopus, , Dept Zoology Cambridge, J. Exp. Biol 1963, 40, pp. 187-193.

14. Wells, MJ., 1978, Octopus: physiology and behaviour of an advanced invertebrate. London: Chapman and Hall; New York: Halsted Press.

15. Hochner, Shomrat and Fiorito, 2006, The Octopus: A Model for a Comparative Analysis of the Evolution of Learning and Memory Mechanisms, Biol. Bull. 210: 308-317.) © 2006 Marine Biological Laboratory.

16. Hanlon, Roger T, and Messenger John B., 1996, Op.cit, p. 15.

17. Budelmann, Bernd U., and Bleckmann, Horst, 1988, A lateral line analogue in cephalopods: water waves generate microphonic potentials in the epidermal head lines of *Sepia* and *Loliguncula*, Journal of Comparative Physiology: neuroethology, sensory, neural and behavioural physiology, Springer, Vol. 164, No. 1.

The remedies *Sepia* and *Onychoteuthis banksii* (clubhook squid), experience a strong sensation of pressure and compression as well as the sensation of being pulled downwards. The natural inclination of the group, both physically and psychologically, is to be bursting with energy, with the desire for physical activity, yet they feel somehow as if they are being impeded or restricted. This tension, and the desire to break free from the feeling of restriction, results in tearing, bursting and ripping sensations, seen in the remedies *Sepia* and *Eledone* (octopus). In a direct link with pressure changes, *Sepia* is a remedy with an affinity for burst, suppurating eardrums. *Eledone* feels pressure all over the body, even the pressure of clothing is experienced as aggravating.

The rise and fall of the night-feeding Nautilus

The Nautilus' rhythm, like that of much of sea life, is to rise from the depths to feed at night. Its whole body system, with chambers to adjust air and gas balance, is geared towards altitude regulation. The Nautilus needs to be able to endure great changes in atmospheric temperature as well as pressure, and be able to live and move in the dark. At the first show of light, it will descend once more. Correspondingly, in the *Nautilus* proving there were dreams of diving. Upwards and downwards motion aggravates the *Nautilus* patient physically and generally, affecting the limbs and joints, and intensifying the headaches. On a psychological level, the *Nautilus* patient will have concerns regarding upward and downward social mobility. On a spiritual level, the *Nautilus* patient wishes metaphorically to go deep, and to go high; they are driven to devote time to spiritual pursuits, desiring to escape the more mundane or superficial aspects of daily life.

Conclusion

Konrad Z. Lorenz, winner of the Nobel Prize for medicine in 1973, and author of many studies of animal behaviour, as well as *Analogy as a Source of Knowledge*, wrote: "Ethologists are often accused of drawing false analogies between animal and human behaviour. However, no such thing as a false analogy exists: an analogy can be more or less detailed, hence more or less informative."

Correspondences between psyche and substance are familiar to us as homœopaths, and are not limited to animal remedies; plants and minerals reveal their own signatures too. The author's thesis, in researching the marine invertebrate remedies from an evolutionary and sensory point of view, has been to see if this group of early animals might reveal deeper levels of correspondence, or analogy, between patient and medicine. We carry, in evolved and adapted forms, the sensory structures of ancient sea creatures within us. The bones of our middle ears evolved from the gill arches of reptiles and the origins of our sensory organs, nervous system, brain and immune system also find their antecedents in forms of sea life.

It is the author's conclusion, based on a detailed study of 24 marine invertebrates, that the sea remedies, particularly when studied from an evolutionary and sensory point of view, reveal healing potential for some of our deepest existential conflicts. In relation to the sense of touch, the affinity with neurological disorders is unquestionable. The newer remedies made from sea urchins, sea anemones, jellyfish and starfish particularly invite research in this area.

Appendix of Symptoms and Sensations: Touch

Marine Invertebrate Remedies: Common Sensations, Touch

Distortions of size of body or body parts (delusions smaller, bigger, taller);

Delusions as to the nature of the body: disfigured, distorted, disabled, dissolving, without substance/ backbone/ structure.

Sensation of being pushed downwards, compression, or pulled backwards.

Numbness or Oversensitivity. Electric shock sensations. Pins and needles. Stabbing/stitching. Full/tight/bursting or empty/loose/light.

Soft, weak, spineless or hard and inflexible.

Extreme weakness of musculoskeletal system and diseases of the neurological system.

Burning.

Marine Invertebrate Remedies: Common Skin Conditions

Urticaria/hives. Vesicles. Herpes. Eczema. Ulceration: Red or copper coloured itchy, dry eruptions. Pustules/pimples. Warts.

Book information

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The book includes a detailed appendix of symptoms for 24 remedies, in relation to all the senses, for remedies in the following phyla: porifera (sponge), cnidarians (jellyfish, coral and anemones), echinoderm (starfish and sea urchins), marine arthropods (crab and lobster), bivalve and gastropod molluscs, and cephalopods. Detailed materia medica chapters for all remedies are also included. More information at www.likecureslike.org, as well as free downloads of sample chapters.

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