

## Selections.

## THE POLICE FINN OF THE OCEAN.

The shipworm, or teredo, says a writer in one of our Quarterly Reviews, is a bivalve shellfish, which, as if in revenge for the unceasing war waged by mankind against its near relative the oyster, seems to have resolved to extinguish the vitality of as many human beings as lies within its power. That power though exercised by an insignificant shellfish, is a prodigious one, for ever since mankind turned attention to nautical affairs, and went to sea in ships, the teredo has unceasingly endeavoured, unfortunately with too much success, to sink their marine conveyances. Nor have vessels alone been the objects of its attacks; for many a goodly landing pier has had it riddled into shreds, not to speak of bolder attempts, such as to endeavour to swamp Holland by destroying the piles of her embankments. The shipworm is the only mollusc that has ever succeeded in frightening politicians, and more than once it has alarmed them effectually. A century and a quarter ago, indeed, all Europe believed that the United Provinces were doomed to destruction, and that the teredo was sent by God to pull down the growing arrogance of the Hollanders. In our own country, although we undergo no danger of being suddenly submerged, as our Dutch neighbors might be, we have suffered severely in our dockyards and harbors by the operations of the shipworm, to which the soundest and hardest oak offers no impediment. As a defence against it the under water portion of woodwork in dock-yards has been studded with broad-headed iron nails. Like most mollusc, the teredo, though fixed when adult, is free in its young state, and, consequently is enabled to migrate and attach itself wherever mischief can be done by it. Thus ships at sea are attacked, and no wood has yet been found capable of defying its efforts. Even teak and sisor woods, hard as they are, dissolve before it; and though the chemical process of kyanizing timber successfully defeats the ravages of time, it fails before the voracity of the teredo.

By a remarkable instinct, the ship worm tunnels in the direction of the grain of the wood, whatever be its position, and thus succeeds in its purpose with destructive rapidity. The tube with which it lines its bore is sometimes nearly two feet in length; it is not always straight, for if the creature meets an impediment sufficiently hard to defy its power, it takes a circuitous course and thus gets round the obstacle. In like manner, it avoids any interference with its fellow shipworms, winding round them in such a way, that at length a piece of wood attacked by many teredoes becomes transformed into a knot of calcareous tubes. The tube is not the true shell of this dreaded mollusc. That body is to be sought for at its innermost extremity. It consists of two very small curved valves, united at their beaks, and beautifully sculptured on their surface. The pipe or tube is a time-walled shaft, intended to keep up a communication between the animal and the watery element necessary for its existence, and to protect the soft body and long fleshy siphons of the creature. How the cavity in which it lives is excavated is still a matter of discussion among naturalists. There are many shellfish endowed with the instinct to burrow into wood or clay, even hard stone, and it is not yet certain whether they do so by mechanical or chemical agencies, or by a combination of the actions of an augur and a solvent. Many sea-snails as well as bivalve shellfish, have the power to perforate solid substances; and some of the predaceous kind exercise this faculty to the detriment of their brother shellfish, by boring through their outer coverings, and extracting the juice of their bodies, by means of long, soft, extensile trunks. There is reason to believe that this operation is effected by the aid of the silicious teeth which stud their long tongues. These microscope teeth are beautiful objects, exhibiting regular and constant shapes so constant, indeed, that by mere inspection of a fragment of the tongue of a sea or land snail, the naturalist can pronounce to a certainty upon the affinities of the creature to which it belonged. Even its particular genus may be verified; and, in a few years (for this kind of research is as yet novel and only commenced) probably its very species may thus be determined. These teeth are arranged in transverse rows upon the tongue. From an ordinary individual of the common limpet, a tongue two inches in length may be extracted, armed with no fewer than one hundred and fifty, or more heads of denticles, twelve in each row, so that in all it may possess nearly two thousand teeth. The limpet uses this elaborate organ as a rasp with which to reduce the small particles of the substance of the seaweed on which it feeds. In some of our common

garden slugs as many as twenty thousand teeth may be counted. Wonderful indeed is this complication of minute organisms.

Throughout nature apparent evils are compensated by unnoticed benefits. Destructive as the shipworm unquestionably is, nevertheless we could ill dispense with its services. Though a devastator of ships and piers, it is also a protector of both; for were the fragments of wreck and masses of stray timber that would choke harbors and clog the waves, permitted to remain undestroyed, the loss of life and injuries to property that would result, would soon far exceed all the damages done, and dangers caused by the teredo. The active shellfish is one of the police of the ocean—a scavenger and clearer of the sea. It attacks every stray mass of floating or sunken timber with which it comes into contact, and soon reduces it to harmlessness and dust. For one ship sunk by it, one hundred are really saved; and whilst we deprecate the mischief and distress of which it has been the unconscious cause, we are bound to acknowledge that, without its operations, there would be infinitely more treasure buried in the abysses of the deep, and venturesome mariners doomed to watery graves.

## A PICTURE OF MOSCOW.

Imagine a city containing ordinarily a population considerably smaller than that of St. Petersburg, and covering an area nearly twice as great. Imagine this city as large in extent as Paris; imagine it containing some 14,000 houses, of which upwards of 500 are churches and monasteries. Imagine it diversified by a great many hills and valleys, and watered by two rivers—imagine all the possible effects of colour combined in the roofs and faces of its buildings; picture these, separated by extensive straggling gardens, boulevards, and terraces, almost every house in its own enclosure and communicating with the streets by little narrow passages or avenues. Conceive the streets themselves undulating and winding with such surprising caprice, that when you are walking through them, every advance of fifty yards discloses to you a new prospect and almost a new city. Conceive this vast labyrinth inscribed all over with illuminated symbols of trade and calling, and with the characters of a strange and beautiful Eastern language, on which many European grafts have been made, and which looks like Greek spoilt—imagine the money-changers' tables still in the public place, as in ancient times, imagine a long-robed, bearded population, diapered with a profuse mixture of military uniforms, the variety of which defies enumeration—imagine this immense capital losing itself far away on every side amidst gardens, groves, and orchards, in a fertile country, beyond which are inhospitable forests, and no great town anywhere near. Thus you come upon Moscow suddenly where it rises like an enchanted city in the waste. Then pass through its streets, echoing with the strange but not unmusical accents of a tongue unspoken and unknown in any civilized land, towards the Tartar battlements of the Kremlin, rising in dazzling whiteness above the eastern fringe of gardens, bowers, and promenades which border them. Pause a moment to contemplate the intricacy of fantastic turrets in gold, in silver, in sapphire, in the imitation of precious stones in scaly green like the crests of dragons, in bright scarlet, in every hue and every shade, which springs at different elevations towards the cloudless sky of a Moscow August or September. That wilderness of churches, towers, steeples, palaces, on that eminence, within the broad white sweep of the lofty Calmuck parapets—that vast, whimsical, opulent, ancient, more than Gothically varied architectural diadem which crowns the hill above the Moskva—that is the famous Kremlin. No wonder Napoleon coveted it, were it only as an address from which to date the despatches of a conqueror for fourteen days. But wait a moment. Yonder before you is the Spass Varots, or the "miraculous" gate. The sentry has orders to see that you take your hat off as you pass it, or to use his bayonet. On your left, that unaccountable church with nine towers, not one of which in height, size, shape, or colour, resembles any of the others, is the celebrated Vassili Blodjenie, the architect of which was put to death by Ivan the Terrible, because he said he could build another as full of whimsicality; that is, according to Scythian notions, as beautiful, as admirable as divine. Enter the Kremlin; mount laboriously the high tower of Ivan Ylikki, at the foot of which (fallen with a burning bell from its once aerial position) stands on a granite block the king of bells, the largest in the world—400,000lb. in weight (Great Tom of Lincoln does not weigh quite 14,000lb.) Passing at every stand in this gigantic tower (rising, remember, from a lofty em-

inence) other enormous bell, which you cannot think of—such are the prospects successively enrolled beneath—you reach the summit. It is by the magical resources of colour that Moscow astonishes and transports the visitor. Truly, it is worth coming two thousand miles merely for this one spectacle. You stand aloft in the very centre of the very beautiful and wonderful city, the like of which exists not on the face of the earth—"the mother of Russia," its Mosca, and its Modina all in one, the queen of the ancient forests—object of pilgrimage to every Russian ones in his life, even from the banks of the Obi and the shores of the Eastern Ocean. Deep below winds the Moskva eastward; but neither painter nor poet can ever communicate the full effect of that which, far and near, surrounds it—that stupendous abundance of contrasted colours and tints—that forest of cupolas and domes, flashing in such variety of form from different degrees of elevation. Not all the treasures of all the tyrants that ever lived, if lavishly expended by one, in single, long absolute reign, even were he aided by all the genius of man in architecture and in art, could produce a similar result. The natural situation, in the first place, was necessary here; and in the second, 700 years of toil in a peculiar and fantastic taste were equally necessary.—*Morning Post.*

The *Journal de St. Petersburg* of the 10th inst. contains the following manifesto, dated—

St. Petersburg, Aug. 26 (Sept. 9.)

"His Majesty Alexander II., Emperor and Autocrat of all the Russias, King of Poland, being desirous of marking in an especial manner the solemn day in which he assumed the Crown of his ancestors, designed, under date of August 26, (September 7, N. S.) to promulgate a manifesto of grace, the principal disposition of which we hasten to reproduce.

His Majesty's first thought attached itself to the grave events which marked the outset of his reign—upon those days of trial, and at the same time of glory, in which the Emperor received such memorable and such unanimous proofs of prowess, of love, and unshakable fidelity from his subjects.

"For the purpose of perpetuating the remembrance of this noble conduct of the Russian people during the whole duration of the formidable conflict which has just been happily settled, his Majesty, as a recompense for these exploits, and also as a *souvenir*, has designed to institute a commemorative medal, which shall be worn, according to the regulations, on the ribbon of St. Andrew, St. George, or St. Vladimir, by all those of his subjects in the civil or military service who took any part in the events of the late war.

"This medal, similar to that which the Emperor has conferred in particular on the heroic defenders of Sebastopol, who have astonished the world by the longest and most stubborn defence that the annals of nations have retained any record of, will recall to the most remote posterity the military and civil virtues of which all Russia has given proof in the grand national trial which he has just passed through.

"The military, who have shed their blood for their country, the militia, who rose in an instant from the soil of Russia; the clergy, whose eloquent words and unbounded charity have never been wanting to the national cause; the illustrious Russian aristocracy, which, in imitation of its ancestors, has again shown itself foremost in the ranks of valor and devotion; the commercial, industrial, and operative classes, in fine, who have made such great and such noble sacrifices for their country, menaced, have all an equal claim on the gratitude of the Emperor, who thanks them this day, and invokes on the entire nation the blessing of God the Merciful, in the hope that it will soon be granted to His Majesty to efface even the last trace the public and private sufferings that Russia has borne so worthily.

"In the accomplishment of this sacred purpose the Emperor commences by granting great immunities to the provinces of Tauris, Cherson, Ekaterinoff and Archangel, as well as to the whole sea-coast of the Baltic, and in general to all the provinces that have more particularly borne the brunt of the late campaign. Furthermore, and in order to extend as far as possible the circle of his liberality, his Majesty has been pleased to confer on the whole empire the benefits of a general boon, the importance of which can be measured only by the immensity of the sphere it embraces. The Emperor most graciously dispenses the whole of Russia from every burden of military recruiting or conscription for four consecutive years, unless, which God avert, the necessities of war should interpose obstacles in the execution of this measure.