

bees, which may in both instances be deferred, by affording a sufficient supply of food for the wants of the community. This fact has, in the case of bees, been fully proved by Nutt, who has thus been enabled to keep together a hive capable of supplying him with two hundred-weight of honey in the course of the season; and every gardener knows, that the period of flowering may be accelerated, by impoverishing the soil, or impeding the flow of sap, by twisting wire or training woodbine round the stem, or, in fact, by adopting any means which will diminish the supply of food; their object, of course, being to diminish the supply, not actually to cut it off, which would starve the whole community.

DELTA.

SUNDAY MORNING AT SEA.

WRITTEN AT SEA, ON THE 21ST OF NOVEMBER, 1841.

Faint, o'er the bosom of the mighty deep,
 Sounds the low tinkle of our sabbath bell;
 And in our paths the giant billows sleep,
 As if they, too, the day of rest could tell;
 While we the deck with decent haste prepare,
 To bow before the God who heareth prayer.
 And now the sacred formula is heard,
 Time-hallowed in the churches of our land;
 While through the exile's heart its every word
 Thrills with a force those only understand,
 Who, by an adverse fate are doomed to roam
 Far from their kindred, and the ties of home.
 Now, with a force divine, each sentence falls
 On what was once an inattentive ear,
 And, to the now awakened mind, recalls
 Joys once neglected—now, alas! too dear;
 When the great privilege—united prayer—
 Was deemed a thing but little worth our care.
 Now busy fancy conjures up to view
 An aged parent bending at the shrine,
 While tears his venerable face bedew
 For one, an alien from the grace divine;
 And, as he turns to pitying heaven his gaze,
 Still for the far-off prodigal he prays.
 Hark! o'er the water floats the song of praise—
 The glad uprising of a grateful soul,
 To Him who safe the mariner conveys,
 And bids the mighty ocean harmless roll;
 And now the preacher hastens to unfold
 God's tender mercy to his erring soul,
 While many a tearful eye and heaving breast
 Thy power, oh! conscience, feelingly attest.
 The sermon ended, now the good man prays
 That He, whose blessing can alone avail,
 May guard his people in his future days,
 When manhood's wonted health perchance may fail;
 And that each present may be now endued,
 With strength repeated, and with soul renewed;
 Thus passeth, from all godless pleasure free,
 The morning of and Sabbath day at sea.

NOTES ON THE NATURAL HISTORY OF SOUTH
AUSTRALIA—No. VII.

A NATURALIST'S RAMBLE—NO. II.

THE SEA-SHORE.—What a world of ideas does this simple denomination bring to the minds of all classes of people. To the sailor it offers a haven and refuge, on his return from encountering those perils of the vast deep, which still bear a secret charm. To the traveller and lover of the fine arts, it calls to mind foreign climes, the lands of the north, those lands of poetry and romance, chronicling the reigns of a thousand kings, and the rise and fall of mighty empires, in the struggle for power and rule. To how many it forms the conclusion of their hopes, when memory is borne on the waters beyond to the land of their nativity. The merchant regards it as the spot where all certainty of the safety of his valued cargoes is at an end, which are soon far away on the changeable element: while for the invalid, fancy portrays with a steady pencil, the paths which lead to health along its yielding sands. With the *naturalist*, it forms the boundary line between all that is excellent in "field or flood," each giving life to myriads of living beings so differently formed and constituted, from the gigantic whale, who requires a sea wherein to take his pastime, to the atomic beings, who need the aid of the microscope, to bring their fragile forms to the evidence of our grosser senses.

The shores of our southern province offer all the attractions in this last respect that are found in the other quarters of the world. Nature always possesses interest with the philosophic and religious mind, in the various forms she assumes; whether in the trackless desert, in these "the lands of the south," most to be admired in their native and uncultivated beauty; or in the boundless ocean, on which the passing centuries make no impression, as the sounding billows for ever roll on, their limit marked only by the hand of Him who stays their impetuous course, as they wash the shores of the five vast continents of the globe.

St. Vincent's, the smallest of our two gulfs, is now becoming well known to all countries, being that near which the capital of a rising colony is erected, and its extended beach may claim the appellation above given, under which I shall include all mention of the natural history of our shores.

The ships entering the gulf anchor at Holdfast Bay, off the sea-port town of Glenelg: from this spot our ramble will lead us along the eastern or inhabited side of the coast towards its mouth. We come, after a walk of a few miles, to a cove, forming the opening ascent to Marino,* which is rapidly rising in the estimation of all, as a healthy watering-place; and from the inlet we shall pass on to the bold features of the shores beyond. At all times of the year these sands offer a

* Not named, as some suppose, from a sea-port of Italy, but probably from San Marino, the inland town in a republic of the same name, situated on that side which is bounded by the Adriatic Sea, and called after its founder, San Marinus.

delightful walk, the pleasures of which are enhanced by the knowledge that shelter is always at hand from any sudden or unforeseen storm : on one side is a shore always budding and evergreen, on the other, an expanse of waters far as the eye can reach, beneath whose fickle bosom lie the treasures of untold ages.

From the port of Glenelg, till we come to the namesake of the Italian town, a low rising ground alone hides our view of the country beyond, covered with the sea-side plants and shrubs, which grow just above the sun-bleached stones scattered around at high water mark. At this time, the way leads close below these, the only monuments of a never ceasing tide : the sprouting vegetation lines the shore, sometimes covered with myriads of blushing berries,* and among the stones are scattered the dry shells of the cuttle-fish (*Sepia*), though they are seldom seen thrown up by the tide.

At low water the expanse of these sands is very great ; smooth as a mirror in appearance, they always afford a steady footing, and at the very edge of the waves the minute and firmly set pebbles allow of scarcely the slightest impression. The extensive beach exposed to view here slopes with such a gentle declivity, that it is known only by the gradual rising of the waves, which now begin to erase the foot-marks of the gulls and other large birds, who last traversed their brink.

Along this coast are found comparatively but few shells, some of the more common bivalves lie with gaping mouths, buried beneath the drift of the sand, void of inhabitants ; a little struggling shrimp (*Cran-gon*), also occasionally makes its appearance, skipping about most actively on finding itself deserted by its native element ; † and now and then a small fragment of our beautifully striped *Buccina* (trumpet shells), is thrown up. With the exception of these and a few light brown pieces of tangled sea weed, the beautifully smooth expanse of sand lies unbroken by aught save the streams of the briny element, which as the tide recedes, continue to pour down in various breadths, from the low beds of water adjacent to the sandy shore. Even here, though seemingly a place so uncongenial to their habits, some insects are found : a few small *Carabidæ* (beetles) manage to find a subsistence, probably on the minute forms of animal life that lie among the saline particles. ‡ The most active of the little creatures that range these shores is a small species of two-winged fly not unlike the common fly, but with its body of a light blue color ; these small insects though numerous, fly about singly, and are seen along the whole extent of the coast. They sport on the very verge of the billows (beneath whose depths no insect is found), in apparent enjoyment of the heat of the sands, communicated by the great luminary above. Thus passes their

* Many of the sea-side plants are often loaded with these berries, which are of a most beautiful rosy color, sometimes (but only on one side) having a light shade of green.

† I have not yet seen any prawns (*Palaemon*), on this coast.

‡ In the house I likewise found two small new species of this family of uncommon colors, the one was a polished light green, and the other a dark rose color, all the rest I have hitherto seen, with scarcely an exception, have been of different shades of dark brown or black.

short-lived existence, for they shun the rising grounds, the rocks and stones, and even the bright green verdure; always watchful they rise at once on the approach of danger, leaving the observer for some time in doubt of their identity, on account of their small size. Here also is first seen our most common and almost only species of gad-fly (*Tabanus*): though fond of all sandy situations, it seems chiefly to prefer those in the neighbourhood of the sea, never appearing above a few miles inland in any direction, and keeping to the shore alone, in this part of the country: towards the winter both these last insects disappear for some months.

If change of scene is desired, it may be found by continuing our walk along the tops of the broad sand hills: as we descend, the pure sands give way to the pressure of the foot, shining beneath the noon-day sun as if studded with glittering atoms. The smooth and level shore is now hidden from our view, but the distant outline of the deep blue waters, stretches along the horizon on one side, while the other is bounded (at about the distance of twenty miles) by the whole extent of the Mount Lofty range, with its two well-defined peaks and ever-green woods, descending at last just before us as it slopes down to the sea.

Vegetation of a new and powerful kind springs up before us on all sides: the common gum, such a flourishing tree in the turf-covered soil of the plains, is here stunted and dwarfish, but its place is supplied by many varieties of plants, varying in color from the brightest to the deepest green in their exuberant growth, which flourish throughout all the changes of heat and cold. Among these, in early autumn, many sorts of insects sport on active wings, in all the energy of a renewed though short and precarious existence. Here alone the ant-lion finds a proper situation to form its circular pit, and ensnare the giddy ants as they travel o'er the glittering heaps. The sand wasps (*Bembecidæ*), now becoming scarce, are seen searching while borne on noiseless wings, among every bush and clump of grass. Balanced on the erect head of some rigid stalk, that brilliant beetle the purple glossed *Chrysomelâ*, with his polished coat of mail, seems to linger e'er he takes his flight to some distant knoll; and the little yellow cockroach suddenly glides from under the lifted log, rousing from his lethargy the tardy cricket, still waiting for its final change to spread forth its pinions to the breeze, a proof of the powerful effects of the early development of the quickening principle of life.*

Of the busy ants, some larger ones (*Atta*), with fierce aspect and projecting mandibles, are strutting about with Quixotic valor, ready to vent their pent up anger or desire for glory on every inanimate object that may chance to interrupt their passage. Many small dark red moths (of the *Geometridæ*) are rapidly passing to and fro, or skimming as if with the full tide of joy over the tops of the variegated

* These few scarce *Achætidæ* are now in the pupa state, from the first laid eggs of the early hatched, fully developed, and perfected insects of the summer season; whose course is run, e'er many of their species have gone through their second preparatory state; the numerous imagines of the one class, and the few larvæ of the other, probably appearing about the same time.

flowers. Now and then with more lagging flight appear those little butter-flies (*Polyommata*) with the bright azure wings, ever and anon resting for a space as they unfold them on the petal of the drooping blue-bell, as if to contrast its delicate hue with their own ethereal color. The earth loving caterpillars have disappeared, and no insidious centipede is here seen crawling along with snake-like form.

At intervals, some bird without the brakes
Starts into voice a moment, then is still,

hiding its dusky plumage among the thick foliage, till its companions arrive. Now from bush to bush they hunt one another along the shore, with the shrill *twit, twit*, of pleasure, as they go and return on untired wings.

Ere we reach our destination, which has long been perceived on the eminence before us, we will again descend to the shore. Long ridges of sea-weed here lie at different distances below the sand-hills, and occasionally approach the still receding waves. Though their summits are dried and even warmed by the beams of the sun, yet they constantly retain much moisture on those parts near the sand: there always shunning the light and heat, are found great numbers of the smaller Isopodæ (*Crustacea*), who may be observed hopping about in every direction, in their efforts to regain their marine habitations.

The hills rise gradually and slope inwards as we approach the site of the future watering place. Here the first object that engages our attention is the cottage to the right; perched as an eyrie on the brow of the hill, for at present the house is hidden from our view: from this cottage a close fence runs along the ridge of the ascent and meets the sloping hills on the opposite side, where a tall crooked flag-staff, surmounted by a miniature pennon, gives the whole a very picturesque effect. Crossing the sand hills again, through the overhanging bushes, we come to a flat of moist arable land, covered in patches with the thick-leaved cactus and its light pink flowers. We will now ascend the gentle slope of the hill by a serpentine path, which renders it less fatiguing. Before we reach the more abrupt summit, a rustic seat is placed upon a level slip of land; over which bends gracefully a drooping cassowary tree, as if to protect and shade the fairer beings of creation who sometimes honor it with their light weight. From this eminence one of the finest views of the gulf is obtained. The dash of every wave as it rolls on the shore below, comes softened to the ear by the intervening space, while ten thousand lights are dancing on their summits, which blend on the horizon into a sea of liquid gold. The extensive firmament is without a cloud to cast a shade o'er the glad prospect spread out before us.

After resting for awhile we move onwards, and pass on our right the little cottage with its fenced enclosure, now seen to be placed on a more solid foundation than the summit of a cliff. A very gentle slope leads up to the house, the situation of which is well chosen; and it is almost the only spot where a dwelling could with safety and comfort be placed, embracing, as it does, so many advantages, which any one on a slight acquaintance with it will easily comprehend. The house consists of a ground floor of a front of three sitting rooms, one of

which opens into a small bed-room behind: this is a snug little place for two individuals. The principal and most comfortable room is that at the other or left-hand corner, especially during the winter months; where many a cheerful family party has collected round the blazing logs, here always seen, though expelled in general from the firesides of northern countries. To the left of these rooms is a semiquadrangle of sleeping apartments, shaded like the front by a verandah, and a few more are situated at the back of the sitting-rooms: a long narrow yard separates the main body of the house from the stables and other out-buildings of the establishment, which are both numerous and ample for the wants of the many lodgers the building will contain. There are, indeed, a few inconveniences in this arrangement, the principal of which is felt during the rainy season, from the incorrect construction of the foundation by the former builder and tenant. The scene around is always cheerful and animated; the numerous dogs of the owners and lodgers, with many fine turkeys and other domestic poultry of an English farm yard, giving clamorous notice of their presence on the first intimation of our approach.

From an elevation at the back of the house, the extended plain, with the various roads to Adelaide is seen, dotted with small *wattles*, and sometimes with grazing cattle; a row of taller trees in the distance, marks where the Sturt rivulet winds its course, bounded by the dark back-ground of the mountains: on each side of us are grass-green hills, with a few trees here and there; those on the right as we face the sea having an occasional copse of low bushes. This would be a good situation to erect a machine for telegraphing to Glenelg as soon as a vessel comes in sight. The verdure of the hills to the left is renewed with redoubled vigour after the fires have passed off, which in the summer season burn up the long and tinder-like grass, rustling together during the prevalence of the hot winds. Here many goats are seen feeding on the luxurious pasture, their playful kids skipping from crag to crag, or bounding down the slope and back again to their more sober dams, who, as evening approaches, wend their way homewards across the gully. In front of the house, a plan of a small garden is laid out, but some time will be required to put it in order, as the live stock cannot, without a more substantial enclosure, be kept out: the wished for shrubs cutting the even line of the horizon, will give a most pleasing effect.

This delightful place only wants encouragement to make it everything that could be wished. It is now conducted by a young couple who do their utmost to please, and if visitors are reasonable in their wishes—remembering, the difficulties that occur in the conduct of a house of public entertainment at this distance from Adelaide—there is no doubt that the attention hitherto bestowed will be continued. The only inconvenience of any consequence, is the want of a regular conveyance, but this will, by and bye no doubt be satisfied: it is most felt by those who daily go and return, though in summer the walk (ten miles) is by no means too great once a day.

From the palings, which run along the summit of the sloping hills, a faint line on the opposite side of the gulf may, on a fine day, be dis-

cerned, which is caused by the supposed or refracted outline of the coast (though not by a simple refraction), as the real distance seen even from this elevated situation cannot be above fifteen miles. The whole expanse of shore to the right is visible, with its two small bays, growing fainter and fainter, till they almost melt in distance: to the left the view is bounded by the high grounds and rocks, forming a background to the little cottage which we passed in our ascent, with its smoke curling upwards into the clear ether: vessels are now first seen as they round the point. From this height a picturesque sketch may be made of the house and adjacent hills.

Let us seat ourselves on that sofa under the verandah: here, as evening draws on it will be delightful to contemplate the deep blue waters, and listen to their gentle rippling on the sands below. Now, behind the horizon

—————Once more sinks

The traveller of six thousand years,

succeeded by the rising moon, casting her silvery reflection on the water; while far above

—————The sky

Spreads like an ocean hung on high,
Bespangled with those isles of light,
So wildly, spiritually bright.

In this quiet hour, memory oft wafts us back to the shores of our native land, or reminds us how often we have witnessed this beautiful sight on the placid waters of the ocean, when all our world was in the narrow compass of the ship, far from the strife of towns, and the necessary but plodding concerns of every day life.

In the autumn evenings, when the gentle breeze comes to refresh us after the heat of the day, the naturalist would be much amused, by observing the great number of the *Cicindelidæ* (tiger beetles) that fly into the rooms, attracted by the light of the candles:* these spread over the plains during the day, and are seen lazily climbing up the stalks of the long grass. The light green *Mantidæ* will sometimes also enter the house at this time, and not unfrequently the swift flying bat will invade the privacy of our retreat, till he finds an opening by which to escape and continue his nightly chase.

Nothing can make more solemn "the witching hour of night" than the low booming of the waves on the beach. To me it is a melancholy but pleasing sound, though with some it is connected with feelings of sadness and regret, crowding the mind with recollections of the tales so often heard of dangers encountered on this vast world of waters—"the image of eternity," that eternity which so many have found beneath its depths—but softened by the remembrance that beholding us from his throne on high there is a

God always, everywhere, and all in all.

An early retirement to rest will enable us to rise at break of day, to witness that glorious sight the first appearance of the sun, as it ascends

* These beetles are small, being in length half an inch; there are two species, both very common, especially near the sea at this season. The few others that are known, appear to be all scarce.

like a ball of fire from the bosom of the ocean. The gentle sea breeze now invites to a ramble along the shores below. We first meet with the bathing machine, which for want of custom has fallen into disuse : some little *Cassidæ* (tortoise beetles) are found about this marine summer-house. Not far off, a small spot of sand moister than the rest, marks the place where the water running from the hills above, mingles with the salter element ; this little stream which supplies the house from its source is sometimes brackish, when this is the case the water is brought for domestic purposes from a greater distance. The tide-washed shores on each side of this inlet, but more particularly those to the right which are not so stony, have long been favorite places for the salubrious exercise of bathing, and during low water a furlong in extent may be gone over, without getting out of depth, when the vast shallows lie exposed in long ridges here and there for a great distance. About these shores the wild dogs are said to range at night, always hiding during the day.

Taking our walk along the coast to the left, we come to a romantic and diversified scene, the cliffs rising in bold and rugged perpendiculars with caverns where *mermaids* might dwell. The shore is now covered from the base of the cliffs beyond the lowest ebb of the tide with large stones, usually black or dark-colored, which are washed round and smooth by the action of the waves. Passing on, the house is soon hidden from our view by the projecting headlands, and we come to a level shore composed of rocky strata, with many cracks and fissures, over which the stones lie thinly scattered. Soon a noble barrier of rocks rises to our sight, their summits broken into jagged peaks, all inclining towards the sea, with large chasms and water holes between them. It is a grand sight to watch the tide coming in, when the waves dash with reverberating sound upon the dark array of points.

Among these stones, and along the whole of this coast thousands of shells lie scattered ; among others are a few of the scarce cones, (*Coni*), here always small, and many of the now perfect *Buccina*,* with their pink and wavy lines ; there are likewise several large *Murices* of plain colors, the more common *Bullæ*, and some small *Ostrea* : no cowries (*Cypriæ*), are found along this portion of the coast, nor any *Multivalves*, small *turbones*, *trochi*, and *neritæ* in vast numbers are seen in every direction, the first of which presents many species as handsome as the variegated trumpet shells. The animals inhabiting these three last genera are admired by the lovers of the so called periwinkles, who affirm that they make when boiled an excellent dish ; no doubt they are so to those who can conquer the first feelings of antipathy against them. The jagged peaks are thickly covered, and sometimes loaded with the jet black *neritæ*, with their pearly mouths, and limpets (*Patellæ*), with their elegant radii of all sizes and colors : these hold with great tenacity to the rocks, sending forth a thin sprinkling of the briny element as a defence against those who attempt to molest them. Under the stones and in the crevices,

* I speak only of the Linnæan genera. I shall have occasion not long hence, to notice the conchology of other parts of our coast, where many shells of great size and beauty have been found.

are found numerous crabs (of three or four different species), clutching at and holding the stick that draws them into light, or waddling sideways to escape : small fragments of sea eggs (Echini), are often picked up, but none are perfect, being dashed to pieces by the violence of the waves against the stones. Those singular box fishes, covered with spines are occasionally seen, and at intervals large mis-shapen pieces of sponge, which sometimes contain beautiful conchological specimens imbedded in them. At night some of the eatable kinds of fish are found in the crannies of the rocks, left by the receding tide.

Over the whole expanse of the vast world of waters the sea-gulls fly with unceasing rapidity, dipping their wings on the crest of the rising waves. The playful porpoises (*Phocænae*) here sport at large, showing their black and heavy forms above the billows. The whale fisheries of the southern seas afford much scope for description. The great southern whale (*Balana Australis*, a smaller species than the northern) here ranges beneath its unmeasurable depths.

Than boundless ocean ! so calm in thy repose but so terrible in thy wrath, when upon thy raging billow

————— The Almighty's form

Glasses itself in tempests :

may thy waves still dash on our rocky shores, and their progress ne'er be stayed, till they bear on their yielding surface the commerce and the fleet of a new country, of a nation whose shores are lined with cities and villages—until plenty and happiness shall smile on all.

But I must bring this ramble to a close, though in imagination I could wander long among the various natural beauties of these peaceful shores. Near the foot of the beetling cliffs, where but little vegetation can find a hold, we pass by rocks piled in irregular masses, round whose bases the little *Isopodæ* (small wood lice), are seen running in great numbers : here still remains the wreck of some old boat, hardly held together by its copper nails, encountering all the vicissitudes of weather and sea : a little further on are seen the rude though not unskilful attempts at the formation of a pier, with the large and angular blocks of stone that lie around. At last a road leads inland, by a passage through the opening rocks, and the scene entirely changes : taking our last look at the time beaten shores, we enter upon what may be truly termed a beautiful valley, when contrasted with the frowning cliffs we have just left ; flowers and grasses spring up in our path, and sloping hills arise on each side.

We once more ascend the acclivity on our left, and again behold on the horizon the distant waves of the gulf, while the beach lies far below ; and we hasten onwards, as the house once more rises before us on the brow of an adjacent hill.

And now adieu to thee Marino. Health rests on thy shining sands—she is borne on the zephyr that curls thy light waves, now sparkling in the sunbeams, and wantons among the evergreen hills that line thy verdant coast ! May prosperity attend thee.

NATURE AMATOR.

July, 1842.

MENTAL CULTURE.

INTRODUCTORY DISCOURSE TO THE SOUTH AUSTRALIAN LITERARY AND SCIENTIFIC ASSOCIATION AND MECHANICS' INSTITUTE, DELIVERED BY THE HON. WILLIAM SMILLIE, IN THE QUENEN'S THEATRE, ON THE 26TH JULY, 1842, AND PUBLISHED AT THE REQUEST OF THE COMMITTEE.

THE invitation with which I have been honored by the conductors of this Institution to open the course of lectures this season, by an introductory address, I venture now to fulfil; sensible indeed of the high compliment which my having been selected for this duty imports, but deeply aware also of its responsibility. Public instruction always involves serious considerations; but how much more so now, when this Society, in a state of its affairs requiring great energy and animated persuasion to rally its forces, is met to attempt a revival of that spirit in the prosecution of knowledge—the high attribute of all civilised communities—which (we lament) has been long apathetic and dormant here: and when it becomes my duty, to lay before this large assembly, *the chart* as it were of the region through which we are to travel; to indicate the tracks which may be followed out with safety and advantage; and to warn, it may be, against some dangers, which always in similar undertakings more or less beset the path.

In the observations which I shall have the honor to address to you, I propose at the outset to advert to the subject of popular education in a general point of view, and in the sequel to request your attention to some particular subjects of inquiry, for the cultivation of which we may suppose ourselves to possess peculiar facilities and inducements.

I.—It is our privilege to live in times when the much vexed question will scarcely any longer be entertained, whether the great body of the people ought to be instructed. Knowledge, no longer confined to wealth or rank, no longer the depository of the cloistered sage, is all pervading as the light of heaven itself, and may be sought and enjoyed by every willing mind. Can there be evil or danger in this? Must the upper ranks necessarily suffer because the industrious classes are advanced in intellectual condition? Will they not rather be emulous of greater attainments themselves, and be incited to a proportional advancement of the whole structure of society? Must the labouring population tend to vice, or discontent, or rebellious anarchy, in proportion as it treads in the footsteps of the superior classes? To acquiesce in such assumptions, we must disrobe the human mind of its loftiest attributes, and presuppose the meanest tendencies of our nature, to increase in proportion to the advancement of civilization!

Rank, and wealth, and other outward advantages must ever, while society is constituted as it is, have their due respect and consequence. Nay! their appreciation will even be more just in proportion as intelligence is disseminated. Because it is not from slavish subjection that power is derived. It is not from the prevalence of ignorance, that the superiority of the educated is to draw happiness by a questionable eminence. But a wide spread intelligence among the people, while it is conscious of its own worth, and can propose to itself objects of happiness, which shall be inherently noble, and yet not misplaced, will suggest what is due to the appropriate resources of the higher conditions of life. The gradations of society are the ordinance of God; and, according to the beautiful illustration of Goldsmith, must obtain in one shape or another, so long as disparity shall characterise the constitution of man. A well directed improvement of the people cannot render them less disposed to uphold the wisely settled order of society—and we may dismiss the antiquated notion, which regards with jealousy and distrust the participation by the great body of the people of the advantages of education.

But it has been objected to those exertions which would bring the truths of science within popular reach by familiar exposition, that it strikes at the stability and dignity of philosophy, that a little knowledge is a dangerous thing, and that the mind, dissipated by mere novelty and variety, will acquire a disrelish for steady occupation in fixed scientific pursuits. But surely, because truths are made accessible to multitudes, who would otherwise have had no gratifications