

CHAPTER II: THE SERVICE OF THE NORTHERN LIGHTS

I

It were hard to imagine a contrast more sharply defined than that between the lives of the men and women of this family: the one so chambered, so centred in the affections and the sensibilities; the other so active, healthy, and expeditious. From May to November, Thomas Smith and Robert Stevenson were on the mail, in the saddle, or at sea; and my grandfather, in particular, seems to have been possessed with a demon of activity in travel. In 1802, by direction of the Northern Lighthouse Board, he had visited the coast of England from St. Bees, in Cumberland, and round by the Scilly Islands to some place undecipherable by me; in all a distance of 2500 miles. In 1806 I find him starting 'on a tour round the south coast of England, from the Humber to the Severn.' Peace was not long declared ere he found means to visit Holland, where he was in time to see, in the navy-yard at Helvoetsluys, 'about twenty of Bonaparte's English flotilla lying in a state of decay, the object of curiosity to Englishmen.' By 1834 he seems to have been acquainted with the coast of France from Dieppe to Bordeaux; and a main part of his duty as Engineer to the Board of Northern Lights was one round of dangerous and laborious travel.

In 1786, when Thomas Smith first received the appointment, the extended and formidable coast of Scotland was lighted at a single point—the Isle of May, in the jaws of the Firth of Forth, where, on a tower already a hundred and fifty years old, an open coal-fire blazed in an iron chauffer. The whole archipelago, thus nightly plunged in darkness, was shunned by sea-going vessels, and the favourite courses were north about Shetland and west about St. Kilda. When the Board met, four new lights formed the extent of their intentions—Kinnaird Head, in Aberdeenshire, at the eastern elbow of the coast; North Ronaldsay, in Orkney, to keep the north and guide ships passing to the south'ard of Shetland; Island Glass, on Harris, to mark the inner shore of the Hebrides and illuminate the navigation of the Minch; and the Mull of Kintyre. These works were to be attempted against obstacles, material and financial, that might have staggered the most bold. Smith had no ship at his command till 1791; the roads in those outlandish quarters where his business lay were scarce passable when they existed, and the tower on the Mull of Kintyre stood eleven months unlighted while the apparatus toiled and foundered by the way among rocks and mosses. Not only had towers to be built and apparatus transplanted; the supply of oil must be maintained, and the men fed, in the same inaccessible and distant scenes; a whole service, with its routine and hierarchy, had to be called out of nothing; and a new trade (that of lightkeeper) to be taught, recruited, and organised. The funds of the Board were at the first laughably inadequate. They embarked on their career on a loan of twelve hundred pounds, and their income in 1789, after relief by a fresh Act of Parliament, amounted to less than three hundred. It must be supposed that the thoughts of Thomas Smith, in these early years, were sometimes coloured with despair; and since he

built and lighted one tower after another, and created and bequeathed to his successors the elements of an excellent administration, it may be conceded that he was not after all an unfortunate choice for a first engineer.

War added fresh complications. In 1794 Smith came 'very near to be taken' by a French squadron. In 1813 Robert Stevenson was cruising about the neighbourhood of Cape Wrath in the immediate fear of Commodore Rogers. The men, and especially the sailors, of the lighthouse service must be protected by a medal and ticket from the brutal activity of the press-gang. And the zeal of volunteer patriots was at times embarrassing.

'I set off on foot,' writes my grandfather, 'for Marazion, a town at the head of Mount's Bay, where I was in hopes of getting a boat to freight. I had just got that length, and was making the necessary inquiry, when a young man, accompanied by several idle-looking fellows, came up to me, and in a hasty tone said, "Sir, in the king's name I seize your person and papers." To which I replied that I should be glad to see his authority, and know the reason of an address so abrupt. He told me the want of time prevented his taking regular steps, but that it would be necessary for me to return to Penzance, as I was suspected of being a French spy. I proposed to submit my papers to the nearest Justice of Peace, who was immediately applied to, and came to the inn where I was. He seemed to be greatly agitated, and quite at a loss how to proceed. The complaint preferred against me was "that I had examined the Longships

Lighthouse with the most minute attention, and was no less particular in my inquiries at the keepers of the lighthouse regarding the sunk rocks lying off the Land's End, with the sets of the currents and tides along the coast: that I seemed particularly to regret the situation of the rocks called the Seven Stones, and the loss of a beacon which the Trinity Board had caused to be fixed on the Wolf Rock; that I had taken notes of the bearings of several sunk rocks, and a drawing of the lighthouse, and of Cape Cornwall. Further, that I had refused the honour of Lord Edgecombe's invitation to dinner, offering as an apology that I had some particular business on hand."

My grandfather produced in answer his credentials and letter of credit; but the justice, after perusing them, 'very gravely observed that they were "musty bits of paper,"' and proposed to maintain the arrest. Some more enlightened magistrates at Penzance relieved him of suspicion and left him at liberty to pursue his journey,—'which I did with so much eagerness,' he adds, 'that I gave the two coal lights on the Lizard only a very transient look.'

Lighthouse operations in Scotland differed essentially in character from those in England. The English coast is in comparison a habitable, homely place, well supplied with towns; the Scottish presents hundreds of miles of savage islands and desolate moors. The Parliamentary committee of 1834, profoundly ignorant of this distinction, insisted with my grandfather that the work at the various stations should be let out on contract 'in the neighbourhood,' where sheep and deer, and gulls and cormorants, and a few ragged gillies, perhaps crouching in a bee-hive

house, made up the only neighbours. In such situations repairs and improvements could only be overtaken by collecting (as my grandfather expressed it) a few 'lads,' placing them under charge of a foreman, and despatching them about the coast as occasion served. The particular danger of these seas increased the difficulty. The course of the lighthouse tender lies amid iron-bound coasts, among tide-races, the whirlpools of the Pentland Firth, flocks of islands, flocks of reefs, many of them uncharted. The aid of steam was not yet. At first in random coasting sloop, and afterwards in the cutter belonging to the service, the engineer must ply and run amongst these multiplied dangers, and sometimes late into the stormy autumn. For pages together my grandfather's diary preserves a record of these rude experiences; of hard winds and rough seas; and of 'the try-sail and storm-jib, those old friends which I never like to see.' They do not tempt to quotation, but it was the man's element, in which he lived, and delighted to live, and some specimen must be presented. On Friday, September 10th, 1830, the Regent lying in Lerwick Bay, we have this entry: 'The gale increases, with continued rain.' On the morrow, Saturday, 11th, the weather appeared to moderate, and they put to sea, only to be driven by evening into Levenswick. There they lay, 'rolling much,' with both anchors ahead and the square yard on deck, till the morning of Saturday, 18th. Saturday and Sunday they were plying to the southward with a 'strong breeze and a heavy sea,' and on Sunday evening anchored in Otterswick. 'Monday, 20th, it blows so fresh that we have no communication with the shore. We see Mr. Rome on the beach, but we cannot communicate with him.

It blows "mere fire," as the sailors express it.' And for three days

more the diary goes on with tales of davits unshipped, high seas, strong gales from the southward, and the ship driven to refuge in Kirkwall or Deer Sound. I have many a passage before me to transcribe, in which my grandfather draws himself as a man of minute and anxious exactitude about details. It must not be forgotten that these voyages in the tender were the particular pleasure and reward of his existence; that he had in him a reserve of romance which carried him delightedly over these hardships and perils; that to him it was 'great gain' to be eight nights and seven days in the savage bay of Levenswick—to read a book in the much agitated cabin—to go on deck and hear the gale scream in his ears, and see the landscape dark with rain and the ship plunge at her two anchors—and to turn in at night and wake again at morning, in his narrow berth, to the glamorous and continued voices of the gale.

His perils and escapes were beyond counting. I shall only refer to two: the first, because of the impression made upon himself; the second, from the incidental picture it presents of the north islanders. On the 9th October 1794 he took passage from Orkney in the sloop Elizabeth of Stromness. She made a fair passage till within view of Kinnaird Head, where, as she was becalmed some three miles in the offing, and wind seemed to threaten from the south-east, the captain landed him, to continue his journey more expeditiously ashore. A gale immediately followed, and the Elizabeth was driven back to Orkney and lost with all hands. The second escape I have been in the habit of hearing related by an eye-witness, my own father, from the earliest days of childhood. On a September night, the Regent lay in the Pentland Firth in a fog and a violent and windless swell. It was still dark, when they were alarmed by

the sound of breakers, and an anchor was immediately let go. The peep of dawn discovered them swinging in desperate proximity to the Isle of Swona {54a} and the surf bursting close under their stern. There was in this place a hamlet of the inhabitants, fisher-folk and wreckers; their huts stood close about the head of the beach. All slept; the doors were closed, and there was no smoke, and the anxious watchers on board ship seemed to contemplate a village of the dead. It was thought possible to launch a boat and tow the Regent from her place of danger; and with this view a signal of distress was made and a gun fired with a red-hot poker from the galley. Its detonation awoke the sleepers. Door after door was opened, and in the grey light of the morning fisher after fisher was seen to come forth, yawning and stretching himself, nightcap on head. Fisher after fisher, I wrote, and my pen tripped; for it should rather stand wrecker after wrecker. There was no emotion, no animation, it scarce seemed any interest; not a hand was raised; but all callously awaited the harvest of the sea, and their children stood by their side and waited also. To the end of his life, my father remembered that amphitheatre of placid spectators on the beach; and with a special and natural animosity, the boys of his own age. But presently a light air sprang up, and filled the sails, and fainted, and filled them again; and little by little the Regent fetched way against the swell, and clawed off shore into the turbulent firth.

The purpose of these voyages was to effect a landing on open beaches or among shelving rocks, not for persons only, but for coals and food, and the fragile furniture of light-rooms. It was often impossible. In 1831 I find my grandfather 'hovering for a week' about the Pentland Skerries

for a chance to land; and it was almost always difficult. Much knack and enterprise were early developed among the seamen of the service; their management of boats is to this day a matter of admiration; and I find my grandfather in his diary depicting the nature of their excellence in one happily descriptive phrase, when he remarks that Captain Soutar had landed 'the small stores and nine casks of oil with all the activity of a smuggler.' And it was one thing to land, another to get on board again. I have here a passage from the diary, where it seems to have been touch-and-go. 'I landed at Tarbetness, on the eastern side of the point, in a mere gale or blast of wind from west-south-west, at 2 p.m. It blew so fresh that the captain, in a kind of despair, went off to the ship, leaving myself and the steward ashore. While I was in the light-room, I felt it shaking and waving, not with the tremor of the Bell Rock, but with the waving of a tree! This the light-keepers seemed to be quite familiar to, the principal keeper remarking that "it was very pleasant," perhaps meaning interesting or curious. The captain worked the vessel into smooth water with admirable dexterity, and I got on board again about 6 p.m. from the other side of the point.' But not even the dexterity of Soutar could prevail always; and my grandfather must at times have been left in strange berths and with but rude provision. I may instance the case of my father, who was storm-bound three days upon an islet, sleeping in the uncemented and unchimneyed houses of the islanders, and subsisting on a diet of nettle-soup and lobsters.

The name of Soutar has twice escaped my pen, and I feel I owe him a vignette. Soutar first attracted notice as mate of a praam at the Bell Rock, and rose gradually to be captain of the Regent. He was active,

admirably skilled in his trade, and a man incapable of fear. Once, in London, he fell among a gang of confidence-men, naturally deceived by his rusticity and his prodigious accent. They plied him with drink—a hopeless enterprise, for Soutar could not be made drunk; they proposed cards, and Soutar would not play. At last, one of them, regarding him with a formidable countenance, inquired if he were not frightened? ‘I’m no’ very easy fleyed,’ replied the captain. And the rooks withdrew after some easier pigeon. So many perils shared, and the partial familiarity of so many voyages, had given this man a stronghold in my grandfather’s estimation; and there is no doubt but he had the art to court and please him with much hypocritical skill. He usually dined on Sundays in the cabin. He used to come down daily after dinner for a glass of port or whisky, often in his full rig of sou’-wester, oilskins, and long boots; and I have often heard it described how insinuatingly he carried himself on these appearances, artfully combining the extreme of deference with a blunt and seamanlike demeanour. My father and uncles, with the devilish penetration of the boy, were far from being deceived; and my father, indeed, was favoured with an object-lesson not to be mistaken. He had crept one rainy night into an apple-barrel on deck, and from this place of ambush overheard Soutar and a comrade conversing in their oilskins. The smooth sycophant of the cabin had wholly disappeared, and the boy listened with wonder to a vulgar and truculent ruffian. Of Soutar, I may say *tantum vidi*, having met him in the Leith docks now more than thirty years ago, when he abounded in the praises of my grandfather, encouraged me (in the most admirable manner) to pursue his footprints, and left impressed for ever on my memory the image of his own Bardolphian nose. He died not long after.

The engineer was not only exposed to the hazards of the sea; he must often ford his way by land to remote and scarce accessible places, beyond reach of the mail or the post-chaise, beyond even the tracery of the bridle-path, and guided by natives across bog and heather. Up to 1807 my grand-father seems to have travelled much on horseback; but he then gave up the idea—‘such,’ he writes with characteristic emphasis and capital letters, ‘is the Plague of Baiting.’ He was a good pedestrian; at the age of fifty-eight I find him covering seventeen miles over the moors of the Mackay country in less than seven hours, and that is not bad travelling for a scramble. The piece of country traversed was already a familiar track, being that between Loch Eriboll and Cape Wrath; and I think I can scarce do better than reproduce from the diary some traits of his first visit. The tender lay in Loch Eriboll; by five in the morning they sat down to breakfast on board; by six they were ashore—my grandfather, Mr. Slight an assistant, and Soutar of the jolly nose, and had been taken in charge by two young gentlemen of the neighbourhood and a pair of gillies. About noon they reached the Kyle of Durness and passed the ferry. By half-past three they were at Cape Wrath—not yet known by the emphatic abbreviation of ‘The Cape’—and beheld upon all sides of them unfrequented shores, an expanse of desert moor, and the high-piled Western Ocean. The site of the tower was chosen. Perhaps it is by inheritance of blood, but I know few things more inspiriting than this location of a lighthouse in a designated space of heather and air, through which the sea-birds are still flying. By 9 p.m. the return journey had brought them again to the shores of the Kyle. The night was dirty, and as the sea was high and the ferry-boat small, Soutar and Mr.

Stevenson were left on the far side, while the rest of the party embarked and were received into the darkness. They made, in fact, a safe though an alarming passage; but the ferryman refused to repeat the adventure; and my grand-father and the captain long paced the beach, impatient for their turn to pass, and tormented with rising anxiety as to the fate of their companions. At length they sought the shelter of a shepherd's house. 'We had miserable up-putting,' the diary continues, 'and on both sides of the ferry much anxiety of mind. Our beds were clean straw, and but for the circumstance of the boat, I should have slept as soundly as ever I did after a walk through moss and mire of sixteen hours.'

To go round the lights, even to-day, is to visit past centuries. The tide of tourists that flows yearly in Scotland, vulgarising all where it approaches, is still defined by certain barriers. It will be long ere there is a hotel at Sumburgh or a hydropathic at Cape Wrath; it will be long ere any char-à-banc, laden with tourists, shall drive up to Barra Head or Monach, the Island of the Monks. They are farther from London than St. Petersburg, and except for the towers, sounding and shining all night with fog-bells and the radiance of the light-room, glittering by day with the trivial brightness of white paint, these island and moorland stations seem inaccessible to the civilisation of to-day, and even to the end of my grandfather's career the isolation was far greater. There ran no post at all in the Long Island; from the light-house on Barra Head a boat must be sent for letters as far as Tobermory, between sixty and seventy miles of open sea; and the posts of Shetland, which had surprised Sir Walter Scott in 1814, were still unimproved in 1833, when my grandfather reported on the subject. The group contained at the time a

population of 30,000 souls, and enjoyed a trade which had increased in twenty years seven-fold, to between three and four thousand tons. Yet the mails were despatched and received by chance coasting vessels at the rate of a penny a letter; six and eight weeks often elapsed between opportunities, and when a mail was to be made up, sometimes at a moment's

notice, the bellman was sent hastily through the streets of Lerwick.

Between Shetland and Orkney, only seventy miles apart, there was 'no trade communication whatever.'

Such was the state of affairs, only sixty years ago, with the three largest clusters of the Scottish Archipelago; and forty-seven years earlier, when Thomas Smith began his rounds, or forty-two, when Robert Stevenson became conjoined with him in these excursions, the barbarism was deep, the people sunk in superstition, the circumstances of their life perhaps unique in history. Lerwick and Kirkwall, like Guam or the Bay of Islands, were but barbarous ports where whalers called to take up and to return experienced seamen. On the outlying islands the clergy lived isolated, thinking other thoughts, dwelling in a different country from their parishioners, like missionaries in the South Seas. My grandfather's unrivalled treasury of anecdote was never written down; it embellished his talk while he yet was, and died with him when he died; and such as have been preserved relate principally to the islands of Ronaldsay and Sanday, two of the Orkney group. These bordered on one of the water-highways of civilisation; a great fleet passed annually in their view, and of the shipwrecks of the world they were the scene and cause of a proportion wholly incommensurable to their size. In one year,

1798, my grandfather found the remains of no fewer than five vessels on the isle of Sanday, which is scarcely twelve miles long.

‘Hardly a year passed,’ he writes, ‘without instances of this kind; for, owing to the projecting points of this strangely formed island, the lowness and whiteness of its eastern shores, and the wonderful manner in which the scanty patches of land are intersected with lakes and pools of water, it becomes, even in daylight, a deception, and has often been fatally mistaken for an open sea. It had even become proverbial with some of the inhabitants to observe that “if wrecks were to happen, they might as well be sent to the poor isle of Sanday as anywhere else.” On this and the neighbouring islands the inhabitants had certainly had their share of wrecked goods, for the eye is presented with these melancholy remains in almost every form. For example, although quarries are to be met with generally in these islands, and the stones are very suitable for building dykes (Anglicé, walls), yet instances occur of the land being enclosed, even to a considerable extent, with ship-timbers. The author has actually seen a park (Anglicé, meadow) paled round chiefly with cedar-wood and mahogany from the wreck of a Honduras-built ship; and in one island, after the wreck of a ship laden with wine, the inhabitants have been known to take claret to their barley-meal porridge. On complaining to one of the pilots of the badness of his boat’s sails, he replied to the author with some degree of pleasantry, “Had it been His will that you came na’ here wi’ your lights, we might ‘a’ had better sails to our boats, and more o’ other things.” It may further be mentioned that when some of Lord Dundas’s

farms are to be let in these islands a competition takes place for the lease, and it is bona fide understood that a much higher rent is paid than the lands would otherwise give were it not for the chance of making considerably by the agency and advantages attending shipwrecks on the shores of the respective farms.’

The people of North Ronaldsay still spoke Norse, or, rather, mixed it with their English. The walls of their huts were built to a great thickness of rounded stones from the sea-beach; the roof flagged, loaded with earth, and perforated by a single hole for the escape of smoke. The grass grew beautifully green on the flat house-top, where the family would assemble with their dogs and cats, as on a pastoral lawn; there were no windows, and in my grandfather’s expression, ‘there was really no demonstration of a house unless it were the diminutive door.’ He once landed on Ronaldsay with two friends. The inhabitants crowded and pressed so much upon the strangers that the bailiff, or resident factor of the island, blew with his ox-horn, calling out to the natives to stand off and let the gentlemen come forward to the laird; upon which one of the islanders, as spokesman, called out, “God ha’e us, man! thou needsna mak’ sic a noise. It’s no’ every day we ha’e three hatted men on our isle.” When the Surveyor of Taxes came (for the first time, perhaps) to Sanday, and began in the King’s name to complain of the unconscionable swarms of dogs, and to menace the inhabitants with taxation, it chanced that my grandfather and his friend, Dr. Patrick Neill, were received by an old lady in a Ronaldsay hut. Her hut, which was similar to the model described, stood on a Ness, or point of land jutting into the sea. They were made welcome in the firelit cellar, placed ‘in casey or

straw-worked chairs, after the Norwegian fashion, with arms, and a canopy overhead,' and given milk in a wooden dish. These hospitalities attended to, the old lady turned at once to Dr. Neill, whom she took for the Surveyor of Taxes. 'Sir,' said she, 'gin ye'll tell the King that I canna keep the Ness free o' the Bangers (sheep) without twa hun's, and twa guid hun's too, he'll pass me threa the tax on dugs.'

This familiar confidence, these traits of engaging simplicity, are characters of a secluded people. Mankind—and, above all, islanders—come very swiftly to a bearing, and find very readily, upon one convention or another, a tolerable corporate life. The danger is to those from without, who have not grown up from childhood in the islands, but appear suddenly in that narrow horizon, life-sized apparitions. For these no bond of humanity exists, no feeling of kinship is awakened by their peril; they will assist at a shipwreck, like the fisher-folk of Lunga, as spectators, and when the fatal scene is over, and the beach strewn with dead bodies, they will fence their fields with mahogany, and, after a decent grace, sup claret to their porridge. It is not wickedness: it is scarce evil; it is only, in its highest power, the sense of isolation and the wise disinterestedness of feeble and poor races. Think how many viking ships had sailed by these islands in the past, how many vikings had landed, and raised turmoil, and broken up the barrows of the dead, and carried off the wines of the living; and blame them, if you are able, for that belief (which may be called one of the parables of the devil's gospel) that a man rescued from the sea will prove the bane of his deliverer. It might be thought that my grandfather, coming there

unknown, and upon an employment so hateful to the inhabitants, must have

run the hazard of his life. But this were to misunderstand. He came franked by the laird and the clergyman; he was the King's officer; the work was 'opened with prayer by the Rev. Walter Trail, minister of the parish'; God and the King had decided it, and the people of these pious islands bowed their heads. There landed, indeed, in North Ronaldsay, during the last decade of the eighteenth century, a traveller whose life seems really to have been imperilled. A very little man of a swarthy complexion, he came ashore, exhausted and unshaved, from a long boat passage, and lay down to sleep in the home of the parish schoolmaster. But he had been seen landing. The inhabitants had identified him for a Pict, as, by some singular confusion of name, they called the dark and dwarfish aboriginal people of the land. Immediately the obscure ferment of a race-hatred, grown into a superstition, began to work in their bosoms, and they crowded about the house and the room-door with fearful whisperings. For some time the schoolmaster held them at bay, and at last despatched a messenger to call my grand-father. He came: he found the islanders beside themselves at this unwelcome resurrection of the dead and the detested; he was shown, as adminicular of testimony, the traveller's uncouth and thick-soled boots; he argued, and finding argument unavailing, consented to enter the room and examine with his own

eyes the sleeping Pict. One glance was sufficient: the man was now a missionary, but he had been before that an Edinburgh shopkeeper with whom

my grandfather had dealt. He came forth again with this report, and the folk of the island, wholly relieved, dispersed to their own houses. They

were timid as sheep and ignorant as limpets; that was all. But the Lord deliver us from the tender mercies of a frightened flock!

I will give two more instances of their superstition. When Sir Walter Scott visited the Stones of Stennis, my grandfather put in his pocket a hundred-foot line, which he unfortunately lost.

‘Some years afterwards,’ he writes, ‘one of my assistants on a visit to the Stones of Stennis took shelter from a storm in a cottage close by the lake; and seeing a box-measuring-line in the bole or sole of the cottage window, he asked the woman where she got this well-known professional appendage. She said: “O sir, ane of the bairns fand it lang syne at the Stanes; and when drawing it out we took fright, and thinking it had belanged to the fairies, we threw it into the bole, and it has layen there ever since.”’

This is for the one; the last shall be a sketch by the master hand of Scott himself:

‘At the village of Stromness, on the Orkney main island, called Pomona, lived, in 1814, an aged dame called Bessie Millie, who helped out her subsistence by selling favourable winds to mariners. He was a venturous master of a vessel who left the roadstead of Stromness without paying his offering to propitiate Bessie Millie! Her fee was extremely moderate, being exactly sixpence, for which she boiled her kettle and gave the bark the advantage of her prayers, for she disclaimed all unlawful acts. The wind thus petitioned for was sure,

she said, to arrive, though occasionally the mariners had to wait some time for it. The woman's dwelling and appearance were not unbecoming her pretensions. Her house, which was on the brow of the steep hill on which Stromness is founded, was only accessible by a series of dirty and precipitous lanes, and for exposure might have been the abode of Eolus himself, in whose commodities the inhabitant dealt. She herself was, as she told us, nearly one hundred years old, withered and dried up like a mummy. A clay-coloured kerchief, folded round her neck, corresponded in colour to her corpse-like complexion. Two light blue eyes that gleamed with a lustre like that of insanity, an utterance of astonishing rapidity, a nose and chin that almost met together, and a ghastly expression of cunning, gave her the effect of Hecate. Such was Bessie Millie, to whom the mariners paid a sort of tribute with a feeling between jest and earnest.'

II

From about the beginning of the century up to 1807 Robert Stevenson was in partnership with Thomas Smith. In the last-named year the partnership was dissolved; Thomas Smith returning to his business, and my grandfather becoming sole engineer to the Board of Northern Lights.

I must try, by excerpts from his diary and correspondence, to convey to

the reader some idea of the ardency and thoroughness with which he threw himself into the largest and least of his multifarious engagements in this service. But first I must say a word or two upon the life of lightkeepers, and the temptations to which they are more particularly exposed. The lightkeeper occupies a position apart among men. In sea-towers the complement has always been three since the deplorable business in the Eddystone, when one keeper died, and the survivor, signalling in vain for relief, was compelled to live for days with the dead body. These usually pass their time by the pleasant human expedient of quarrelling; and sometimes, I am assured, not one of the three is on speaking terms with any other. On shore stations, which on the Scottish coast are sometimes hardly less isolated, the usual number is two, a principal and an assistant. The principal is dissatisfied with the assistant, or perhaps the assistant keeps pigeons, and the principal wants the water from the roof. Their wives and families are with them, living cheek by jowl. The children quarrel; Jockie hits Jimsie in the eye, and the mothers make haste to mingle in the dissension. Perhaps there is trouble about a broken dish; perhaps Mrs. Assistant is more highly born than Mrs. Principal and gives herself airs; and the men are drawn in and the servants presently follow. 'Church privileges have been denied the keeper's and the assistant's servants,' I read in one case, and the eminently Scots periphrasis means neither more nor less than excommunication, 'on account of the discordant and quarrelsome state of the families. The cause, when inquired into, proves to be tittle-tattle on both sides.' The tender comes round; the foremen and artificers go from station to station; the gossip flies through the whole system of the service, and the stories, disfigured and exaggerated,

return to their own birthplace with the returning tender. The English Board was apparently shocked by the picture of these dissensions. 'When the Trinity House can,' I find my grandfather writing at Beachy Head, in 1834, 'they do not appoint two keepers, they disagree so ill. A man who has a family is assisted by his family; and in this way, to my experience and present observation, the business is very much neglected. One keeper is, in my view, a bad system. This day's visit to an English lighthouse convinces me of this, as the lightkeeper was walking on a staff with the gout, and the business performed by one of his daughters, a girl of thirteen or fourteen years of age.' This man received a hundred a year! It shows a different reading of human nature, perhaps typical of Scotland and England, that I find in my grandfather's diary the following pregnant entry: 'The lightkeepers, agreeing ill, keep one another to their duty.' But the Scottish system was not alone founded on this cynical opinion. The dignity and the comfort of the northern lightkeeper were both attended to. He had a uniform to 'raise him in his own estimation, and in that of his neighbour, which is of consequence to a person of trust. The keepers,' my grandfather goes on, in another place, 'are attended to in all the detail of accommodation in the best style as shipmasters; and this is believed to have a sensible effect upon their conduct, and to regulate their general habits as members of society.' He notes, with the same dip of ink, that 'the brasses were not clean, and the persons of the keepers not trig'; and thus we find him writing to a culprit: 'I have to complain that you are not cleanly in your person, and that your manner of speech is ungentle, and rather inclines to rudeness. You must therefore take a different view of your duties as a lightkeeper.' A high ideal for the service appears in these expressions,

and will be more amply illustrated further on. But even the Scottish lightkeeper was frail. During the unbroken solitude of the winter months, when inspection is scarce possible, it must seem a vain toil to polish the brass hand-rail of the stair, or to keep an unrewarded vigil in the light-room; and the keepers are habitually tempted to the beginnings of sloth, and must unremittingly resist. He who temporises with his conscience is already lost. I must tell here an anecdote that illustrates the difficulties of inspection. In the days of my uncle David and my father there was a station which they regarded with jealousy. The two engineers compared notes and were agreed. The tower was always clean, but seemed always to bear traces of a hasty cleansing, as though the keepers had been suddenly forewarned. On inquiry, it proved that such was the case, and that a wandering fiddler was the unfailing harbinger of the engineer. At last my father was storm-stayed one Sunday in a port at the other side of the island. The visit was quite overdue, and as he walked across upon the Monday morning he promised himself that he should at last take the keepers unprepared. They were both waiting for him in uniform at the gate; the fiddler had been there on Saturday!

My grandfather, as will appear from the following extracts, was much a martinet, and had a habit of expressing himself on paper with an almost startling emphasis. Personally, with his powerful voice, sanguine countenance, and eccentric and original locutions, he was well qualified to inspire a salutary terror in the service.

I find that the keepers have, by some means or another, got into the

way of cleaning too much with rotten-stone and oil. I take the principal keeper to task on this subject, and make him bring a clean towel and clean one of the brazen frames, which leaves the towel in an odious state. This towel I put up in a sheet of paper, seal, and take with me to confront Mr. Murdoch, who has just left the station.' 'This letter'—a stern enumeration of complaints—'to lie a week on the light-room book-place, and to be put in the Inspector's hands when he comes round.' 'It is the most painful thing that can occur for me to have a correspondence of this kind with any of the keepers; and when I come to the Lighthouse, instead of having the satisfaction to meet them with approbation, it is distressing when one is obliged to put on a most angry countenance and demeanour; but from such culpable negligence as you have shown there is no avoiding it. I hold it as a fixed maxim that, when a man or a family put on a slovenly appearance in their houses, stairs, and lanterns, I always find their reflectors, burners, windows, and light in general, ill attended to; and, therefore, I must insist on cleanliness throughout.' 'I find you very deficient in the duty of the high tower. You thus place your appointment as Principal Keeper in jeopardy; and I think it necessary, as an old servant of the Board, to put you upon your guard once for all at this time. I call upon you to recollect what was formerly and is now said to you. The state of the backs of the reflectors at the high tower was disgraceful, as I pointed out to you on the spot. They were as if spitten upon, and greasy finger-marks upon the back straps. I demand an explanation of this state of things.' 'The cause of the Commissioners dismissing you is expressed in the minute; and it must be a matter of regret to

you that you have been so much engaged in smuggling, and also that the Reports relative to the cleanliness of the Lighthouse, upon being referred to, rather added to their unfavourable opinion.' 'I do not go into the dwelling-house, but severely chide the lightkeepers for the disagreement that seems to subsist among them.' 'The families of the two lightkeepers here agree very ill. I have effected a reconciliation for the present.' 'Things are in a very humdrum state here. There is no painting, and in and out of doors no taste or tidiness displayed. Robert's wife greets and M'Gregor's scolds; and Robert is so down-hearted that he says he is unfit for duty. I told him that if he was to mind wives' quarrels, and to take them up, the only way was for him and M'Gregor to go down to the point like Sir G. Grant and Lord Somerset.' 'I cannot say that I have experienced a more unpleasant meeting than that of the lighthouse folks this morning, or ever saw a stronger example of unfeeling barbarity than the conduct which the ---s exhibited. These two cold-hearted persons, not contented with having driven the daughter of the poor nervous woman from her father's house, both kept pouncing at her, lest she should forget her great misfortune. Write me of their conduct. Do not make any communication of the state of these families at Kinnaird Head, as this would be like Tale-bearing.'

There is the great word out. Tales and Tale-bearing, always with the emphatic capitals, run continually in his correspondence. I will give but two instances:—

‘Write to David [one of the lightkeepers] and caution him to be more prudent how he expresses himself. Let him attend his duty to the Lighthouse and his family concerns, and give less heed to Tale-bearers.’ ‘I have not your last letter at hand to quote its date; but, if I recollect, it contains some kind of tales, which nonsense I wish you would lay aside, and notice only the concerns of your family and the important charge committed to you.’

Apparently, however, my grandfather was not himself inaccessible to the Tale-bearer, as the following indicates:

‘In walking along with Mr. --- , I explain to him that I should be under the necessity of looking more closely into the business here from his conduct at Buddonness, which had given an instance of weakness in the Moral principle which had staggered my opinion of him. His answer was, “That will be with regard to the lass?” I told him I was to enter no farther with him upon the subject.’ ‘Mr. Miller appears to be master and man. I am sorry about this foolish fellow. Had I known his train, I should not, as I did, have rather forced him into the service. Upon finding the windows in the state they were, I turned upon Mr. Watt, and especially upon Mr. Stewart. The latter did not appear for a length of time to have visited the light-room. On asking the cause—did Mr. Watt and him (sic) disagree; he said no; but he had got very bad usage from the assistant, “who was a very obstreperous man.” I could not bring Mr. Watt to put in language his objections to Miller; all I could get was that, he being your friend, and saying he was unwell, he did not like

to complain or to push the man; that the man seemed to have no liking to anything like work; that he was unruly; that, being an educated man, he despised them. I was, however, determined to have out of these unwilling witnesses the language alluded to. I fixed upon Mr. Stewart as chief; he hedged. My curiosity increased, and I urged. Then he said, "What would I think, just exactly, of Mr. Watt being called an Old B-?" You may judge of my surprise. There was not another word uttered. This was quite enough, as coming from a person I should have calculated upon quite different behaviour from. It spoke a volume of the man's mind and want of principle.' 'Object to the keeper keeping a Bull-Terrier dog of ferocious appearance. It is dangerous, as we land at all times of the night.' 'Have only to complain of the storehouse floor being spotted with oil. Give orders for this being instantly rectified, so that on my return to-morrow I may see things in good order.' 'The furniture of both houses wants much rubbing. Mrs. ---'s carpets are absurd beyond anything I have seen. I want her to turn the fenders up with the bottom to the fireplace: the carpets, when not likely to be in use, folded up and laid as a hearthrug partly under the fender.'

My grandfather was king in the service to his finger-tips. All should go in his way, from the principal lightkeeper's coat to the assistant's fender, from the gravel in the garden-walks to the bad smell in the kitchen, or the oil-spots on the store-room floor. It might be thought there was nothing more calculated to awake men's resentment, and yet his rule was not more thorough than it was beneficent. His thought for the keepers was continual, and it did not end with their lives. He tried to

manage their successions; he thought no pains too great to arrange between a widow and a son who had succeeded his father; he was often harassed and perplexed by tales of hardship; and I find him writing, almost in despair, of their improvident habits and the destitution that awaited their families upon a death. 'The house being completely furnished, they come into possession without necessaries, and they go out NAKED. The insurance seems to have failed, and what next is to be tried?' While they lived he wrote behind their backs to arrange for the education of their children, or to get them other situations if they seemed unsuitable for the Northern Lights. When he was at a lighthouse on a Sunday he held prayers and heard the children read. When a keeper was sick, he lent him his horse and sent him mutton and brandy from the ship. 'The assistant's wife having been this morning confined, there was sent ashore a bottle of sherry and a few rusks—a practice which I have always observed in this service,' he writes. They dwelt, many of them, in uninhabited isles or desert forelands, totally cut off from shops. Many of them were, besides, fallen into a rustic dishabitude of life, so that even when they visited a city they could scarce be trusted with their own affairs, as (for example) he who carried home to his children, thinking they were oranges, a bag of lemons. And my grandfather seems to have acted, at least in his early years, as a kind of gratuitous agent for the service. Thus I find him writing to a keeper in 1806, when his mind was already preoccupied with arrangements for the Bell Rock: 'I am much afraid I stand very unfavourably with you as a man of promise, as I was to send several things of which I believe I have more than once got the memorandum. All I can say is that in this respect you are not singular. This makes me no better; but really I have been driven about

beyond all example in my past experience, and have been essentially obliged to neglect my own urgent affairs.' No servant of the Northern Lights came to Edinburgh but he was entertained at Baxter's Place to breakfast. There, at his own table, my grandfather sat down delightedly with his broad-spoken, homespun officers. His whole relation to the service was, in fact, patriarchal; and I believe I may say that throughout its ranks he was adored. I have spoken with many who knew him; I was his grandson, and their words may have very well been words of flattery; but there was one thing that could not be affected, and that was the look and light that came into their faces at the name of Robert Stevenson.

In the early part of the century the foreman builder was a young man of the name of George Peebles, a native of Anstruther. My grandfather had placed in him a very high degree of confidence, and he was already designated to be foreman at the Bell Rock, when, on Christmas-day 1806, on his way home from Orkney, he was lost in the schooner Traveller. The tale of the loss of the Traveller is almost a replica of that of the Elizabeth of Stromness; like the Elizabeth she came as far as Kinnaird Head, was then surprised by a storm, driven back to Orkney, and bilged and sank on the island of Flotta. It seems it was about the dusk of the day when the ship struck, and many of the crew and passengers were drowned. About the same hour, my grandfather was in his office at the writing-table; and the room beginning to darken, he laid down his pen and fell asleep. In a dream he saw the door open and George Peebles come in, 'reeling to and fro, and staggering like a drunken man,' with water streaming from his head and body to the floor. There it gathered into a

wave which, sweeping forward, submerged my grandfather. Well, no matter how deep; versions vary; and at last he awoke, and behold it was a dream! But it may be conceived how profoundly the impression was written even on the mind of a man averse from such ideas, when the news came of the wreck on Flotta and the death of George.

George's vouchers and accounts had perished with himself; and it appeared he was in debt to the Commissioners. But my grandfather wrote to Orkney twice, collected evidence of his disbursements, and proved him to be seventy pounds ahead. With this sum, he applied to George's brothers, and had it apportioned between their mother and themselves. He approached the Board and got an annuity of £5 bestowed on the widow Peebles; and we find him writing her a long letter of explanation and advice, and pressing on her the duty of making a will. That he should thus act executor was no singular instance. But besides this we are able to assist at some of the stages of a rather touching experiment; no less than an attempt to secure Charles Peebles heir to George's favour. He is despatched, under the character of 'a fine young man'; recommended to gentlemen for 'advice, as he's a stranger in your place, and indeed to this kind of charge, this being his first outset as Foreman'; and for a long while after, the letter-book, in the midst of that thrilling first year of the Bell Rock, is encumbered with pages of instruction and encouragement. The nature of a bill, and the precautions that are to be observed about discounting it, are expounded at length and with clearness. 'You are not, I hope, neglecting, Charles, to work the harbour at spring-tides; and see that you pay the greatest attention to

get the well so as to supply the keeper with water, for he is a very helpless fellow, and so unfond of hard work that I fear he could do ill to keep himself in water by going to the other side for it.’—‘With regard to spirits, Charles, I see very little occasion for it.’ These abrupt apostrophes sound to me like the voice of an awakened conscience; but they would seem to have reverberated in vain in the ears of Charles. There was trouble in Pladda, his scene of operations; his men ran away from him, there was at least a talk of calling in the Sheriff. ‘I fear,’ writes my grandfather, ‘you have been too indulgent, and I am sorry to add that men do not answer to be too well treated, a circumstance which I have experienced, and which you will learn as you go on in business.’ I wonder, was not Charles Peebles himself a case in point? Either death, at least, or disappointment and discharge, must have ended his service in the Northern Lights; and in later correspondence I look in vain for any mention of his name—Charles, I mean, not Peebles: for as late as 1839 my grandfather is patiently writing to another of the family: ‘I am sorry you took the trouble of applying to me about your son, as it lies quite out of my way to forward his views in the line of his profession as a Draper.’

III

A professional life of Robert Stevenson has been already given to the world by his son David, and to that I would refer those interested in

such matters. But my own design, which is to represent the man, would be very ill carried out if I suffered myself or my reader to forget that he was, first of all and last of all, an engineer. His chief claim to the style of a mechanical inventor is on account of the Jib or Balance Crane of the Bell Rock, which are beautiful contrivances. But the great merit of this engineer was not in the field of engines. He was above all things a projector of works in the face of nature, and a modifier of nature itself. A road to be made, a tower to be built, a harbour to be constructed, a river to be trained and guided in its channel—these were the problems with which his mind was continually occupied; and for these and similar ends he travelled the world for more than half a century, like an artist, note-book in hand.

He once stood and looked on at the emptying of a certain oil-tube; he did so watch in hand, and accurately timed the operation; and in so doing offered the perfect type of his profession. The fact acquired might never be of use: it was acquired: another link in the world's huge chain of processes was brought down to figures and placed at the service of the engineer. 'The very term mensuration sounds engineer-like,' I find him writing; and in truth what the engineer most properly deals with is that which can be measured, weighed, and numbered. The time of any operation in hours and minutes, its cost in pounds, shillings, and pence, the strain upon a given point in foot-pounds—these are his conquests, with which he must continually furnish his mind, and which, after he has acquired them, he must continually apply and exercise. They must be not only entries in note-books, to be hurriedly consulted; in the actor's phrase, he must be stale in them; in a word of my grandfather's, they

must be 'fixed in the mind like the ten fingers and ten toes.'

These are the certainties of the engineer; so far he finds a solid footing and clear views. But the province of formulas and constants is restricted. Even the mechanical engineer comes at last to an end of his figures, and must stand up, a practical man, face to face with the discrepancies of nature and the hiatuses of theory. After the machine is finished, and the steam turned on, the next is to drive it; and experience and an exquisite sympathy must teach him where a weight should be applied or a nut loosened. With the civil engineer, more properly so called (if anything can be proper with this awkward coinage), the obligation starts with the beginning. He is always the practical man. The rains, the winds and the waves, the complexity and the fitfulness of nature, are always before him. He has to deal with the unpredictable, with those forces (in Smeaton's phrase) that 'are subject to no calculation'; and still he must predict, still calculate them, at his peril. His work is not yet in being, and he must foresee its influence: how it shall deflect the tide, exaggerate the waves, dam back the rain-water, or attract the thunderbolt. He visits a piece of sea-board; and from the inclination and soil of the beach, from the weeds and shell-fish, from the configuration of the coast and the depth of soundings outside, he must deduce what magnitude of waves is to be looked for. He visits a river, its summer water babbling on shallows; and he must not only read, in a thousand indications, the measure of winter freshets, but be able to predict the violence of occasional great floods. Nay, and more; he must not only consider that which is, but that which

may be. Thus I find my grandfather writing, in a report on the North Esk Bridge: 'A less waterway might have sufficed, but the valleys may come to be meliorated by drainage.' One field drained after another through all that confluence of vales, and we come to a time when they shall precipitate by so much a more copious and transient flood, as the gush of the flowing drain-pipe is superior to the leakage of a peat.

It is plain there is here but a restricted use for formulas. In this sort of practice, the engineer has need of some transcendental sense. Smeaton, the pioneer, bade him obey his 'feelings'; my father, that 'power of estimating obscure forces which supplies a coefficient of its own to every rule.' The rules must be everywhere indeed; but they must everywhere be modified by this transcendental coefficient, everywhere bent to the impression of the trained eye and the feelings of the engineer. A sentiment of physical laws and of the scale of nature, which shall have been strong in the beginning and progressively fortified by observation, must be his guide in the last recourse. I had the most opportunity to observe my father. He would pass hours on the beach, brooding over the waves, counting them, noting their least deflection, noting when they broke. On Tweedside, or by Lyne or Manor, we have spent together whole afternoons; to me, at the time, extremely wearisome; to him, as I am now sorry to think, bitterly mortifying. The river was to me a pretty and various spectacle; I could not see—I could not be made to see—it otherwise. To my father it was a chequer-board of lively forces, which he traced from pool to shallow with minute appreciation and enduring interest. 'That bank was being under-cut,' he might say. 'Why? Suppose you were to put a groin out here, would not the *filum fluminis*

be cast abruptly off across the channel? and where would it impinge upon the other shore? and what would be the result? Or suppose you were to blast that boulder, what would happen? Follow it—use the eyes God has given you—can you not see that a great deal of land would be reclaimed upon this side?’ It was to me like school in holidays; but to him, until I had worn him out with my invincible triviality, a delight. Thus he pored over the engineer’s voluminous handy-book of nature; thus must, too, have pored my grand-father and uncles.

But it is of the essence of this knowledge, or this knack of mind, to be largely incommunicable. ‘It cannot be imparted to another,’ says my father. The verbal casting-net is thrown in vain over these evanescent, inferential relations. Hence the insignificance of much engineering literature. So far as the science can be reduced to formulas or diagrams, the book is to the point; so far as the art depends on intimate study of the ways of nature, the author’s words will too often be found vapid. This fact—that engineering looks one way, and literature another—was what my grand-father overlooked. All his life long, his pen was in his hand, piling up a treasury of knowledge, preparing himself against all possible contingencies. Scarce anything fell under his notice but he perceived in it some relation to his work, and chronicled it in the pages of his journal in his always lucid, but sometimes inexact and wordy, style. The Travelling Diary (so he called it) was kept in fascicles of ruled paper, which were at last bound up, rudely indexed, and put by for future reference. Such volumes as have reached me contain a surprising medley: the whole details of his employment in the Northern Lights and his general practice; the whole biography of an enthusiastic

engineer. Much of it is useful and curious; much merely otiose; and much can only be described as an attempt to impart that which cannot be imparted in words. Of such are his repeated and heroic descriptions of reefs; monuments of misdirected literary energy, which leave upon the mind of the reader no effect but that of a multiplicity of words and the suggested vignette of a lusty old gentleman scrambling among tangle. It is to be remembered that he came to engineering while yet it was in the egg and without a library, and that he saw the bounds of that profession widen daily. He saw iron ships, steamers, and the locomotive engine, introduced. He lived to travel from Glasgow to Edinburgh in the inside of a forenoon, and to remember that he himself had 'often been twelve hours upon the journey, and his grand-father (Lillie) two days'! The profession was still but in its second generation, and had already broken down the barriers of time and space. Who should set a limit to its future encroachments? And hence, with a kind of sanguine pedantry, he pursued his design of 'keeping up with the day' and posting himself and his family on every mortal subject. Of this unpractical idealism we shall meet with many instances; there was not a trade, and scarce an accomplishment, but he thought it should form part of the outfit of an engineer; and not content with keeping an encyclopaedic diary himself, he would fain have set all his sons to work continuing and extending it. They were more happily inspired. My father's engineering pocket-book was not a bulky volume; with its store of pregnant notes and vital formulas, it served him through life, and was not yet filled when he came to die. As for Robert Stevenson and the Travelling Diary, I should be ungrateful to complain, for it has supplied me with many lively traits for this and subsequent chapters; but I must still remember much of the period of my

study there as a sojourn in the Valley of the Shadow.

The duty of the engineer is twofold—to design the work, and to see the work done. We have seen already something of the vociferous thoroughness of the man, upon the cleaning of lamps and the polishing of reflectors. In building, in road-making, in the construction of bridges, in every detail and byway of his employments, he pursued the same ideal. Perfection (with a capital P and violently under-scored) was his design. A crack for a penknife, the waste of ‘six-and-thirty shillings,’ ‘the loss of a day or a tide,’ in each of these he saw and was revolted by the finger of the sloven; and to spirits intense as his, and immersed in vital undertakings, the slovenly is the dishonest, and wasted time is instantly translated into lives endangered. On this consistent idealism there is but one thing that now and then trenches with a touch of incongruity, and that is his love of the picturesque. As when he laid out a road on Hogarth’s line of beauty; bade a foreman be careful, in quarrying, not ‘to disfigure the island’; or regretted in a report that ‘the great stone, called the Devil in the Hole, was blasted or broken down to make road-metal, and for other purposes of the work.’