

# A History of Babylonia and Assyria

Volume I

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## **PREFACE**

During the past ten years, when not absorbed in the duties of a busy professorship, I have given my time to the preparation of this work. In its interest I have made repeated journeys to Europe, and also to the East, and the greater part of the text has been written in the University Library at Leipzig, the British Museum in London, and the Bodleian Library in Oxford. In the last named I have had especial opportunity to investigate the early history of cuneiform research in the almost unrivaled collections of early travelers and decipherers. Large parts of the book have been rewritten twice or thrice as changes in opinion and the discovery of fresh monumental material have modified the views previously entertained. Whatever may be the judgment of my fellow-investigators in this difficult field, it will not truthfully be said that I have not taken pains.

Every part of the two volumes rests upon original sources, yet I have tried to consider all that modern Assyriologists have brought forward in elucidation of them, and have sought to give due credit for every explanation which I have accepted, and to treat with courtesy and respect any that I have ventured to reject. The progress of Assyriology in the past twenty years has been so rapid that every book on the history of Babylonia and Assyria published prior to 1880 is hopelessly antiquated, and many issued much later would need extensive revision. The work of investigation has fallen necessarily into the hands of specialists, and so vast has the field grown that there are now specialists in even small parts of the subject. The results of all this detailed research are scattered in scientific journals and monographs in almost all the languages of Europe. To sift, weigh, and decide upon their merits is no easy task, and I am sadly conscious that it might have been better done; yet am I persuaded that scholars who know the field intimately will recognize the difficulties and be most ready to pardon the shortcomings which each may discover in his own province.

I have sought to tell the whole story as scholars now generally understand it, rather being disposed to yield to the consensus of opinion, when any exists, than eager to set forth novel personal opinions. Yet in parts of the field at least I may claim to be an independent investigator, and to have made contributions to the knowledge of the subject.

In travel and in research in the libraries and museums of Paris, Berlin, Cairo, Constantinople, and elsewhere I have received many courtesies which I should gladly acknowledge here did it not seem disproportionate to carve great names on so small a structure. The obligations to my friend Professor Sayce are, however, so unusual that they must be expressed. He has read the entire book in manuscript, and made many suggestions, some of which led me to change my view, while others showed me wherein I had written obscurely or had failed to defend my position adequately. I am grateful to him for this new illustration of his unflinching kindness and generosity to younger men.

I take leave of the book with mingled pleasure, and regret, hoping only that it may prove sufficiently useful to demand and deserve a revision at no distant day.

ROBERT W. ROGERS.

MADISON, NEW JERSEY, September 18, 1900.

# BOOK I: PROLEGOMENA

## CHAPTER I

### EARLY TRAVELERS AND EARLY DECIPHERERS

Prior to 1820 the only knowledge possessed by the world of the two cities Babylon and Nineveh, and of the empires which they founded and led, was derived from peoples other than their inhabitants. No single word had come from the deep stillness of the ruins of Babylon, no voice was heard beneath the mounds of Nineveh. It would then have seemed a dream of impossible things to hope that some future day would discover buried libraries in these mounds, filled with books in which these peoples had written not only their history and chronology, but their science, their operations of building, their manners and customs, their very thoughts and emotions. That the long-lost languages in which these books were written should be recovered, that men should read them as readily and as surely as the tongues of which traditional use had never ceased among men—all this would then have seemed impossible indeed. But this and much more has happened. From these long-lost, even forgotten materials the history of Babylonia and Assyria has become known. These are now the chief sources of our knowledge, and before we begin our survey of the long line of the centuries it is well that we should look at the steps by which our sources were secured.

The story of the rediscovery of Babylonia and Assyria is really twofold. Two lines of research, pursued separately for a long time, at last formed a union, and from that union has resulted present knowledge. By the one line the ancient sources were rediscovered, by the other men learned how to read them.

The first clue which led to the rediscovery of the ancient language of Babylonia and of Assyria was not found in either of these two lands. It was not found by a scholar who set out to search for it. It was not a brilliant discovery made in a day, to become the wonder of ages. It was rather the natural result of a long, tedious, and somewhat involved process. It began and long continued to be in the hands of travelers, each learning a little from his predecessors, and then adding a mite as the result of his own observation. It was found in the most unlikely place in Persia, far from Babylonia and Assyria. The story of its finding is worth the telling, not only because it is necessary to any just appreciation of our present knowledge of Assyria and Babylonia, but because it has its own interest, and is instructive as a history of the progress of knowledge.

In Persia, forty miles northeast of Shiraz, once the capital of the kingdom, there is a range of everlasting hills, composed of a marble of dark grey limestone, which bears the name of Mount Rachmet. In front of this ridge, and in a semicircular hollow, there rises above the plain a vast terracelike platform. Nature built this terrace in part, but man at some time erected a wall in front of it, leveled off the top, and there built great palaces and temples. In the Middle Ages this land of Persia became full of interest for various reasons. It had an important commerce with Europe, and that naturally drew men of trade from Europe into its extensive plateaus, that were reeking with heat in summer, and equally uncomfortable in the bleak cold of winter. The commercial contact of Persia led, also, most naturally to diplomatic intercourse of various kinds with European states, and this intercourse gradually made the land known in some measure to the West.

The earliest European, at present known to us, who visited the great terrace at the foot of Mount Rachmet was a wandering friar, Odoric, or Odoric, by name. He was going overland to Cathay, and on the way passed between Yezd and Huz, about 1320 A. D. He had no time to look at ruins, and appears hardly to have seen them at all. Yet his record is the first word heard in Europe concerning the ruins at Persepolis:

"I came unto a certaine citie called Comum, which was an huge and mightie city in olde time, conteyning well nigh fiftie miles in circuite, and hath done in times past great damage unto the Romanes. In it there are stately palaces altogether destitute of inhabitants, notwithstanding it aboundeth with great store of victuals."<sup>1</sup>

The passage is disappointing. Odoric was a "man of little refinement"<sup>2</sup> and, though possessed of a desire to wander and see strange sights, cared little for the intellectual or spiritual meaning of great places. It is an oft-recurring statement with him that he found good "victuals," and with that his simple soul was content. He evidently did not know what place the ancient ruins marked, and that he cared at all does not appear. So simple is his word that men have even doubted whether he ever saw the ruins with his own

eyes; but there is no real reason to doubt that he did. But even though he saw little and said less, his narrative was almost a classic before the invention of printing, and was copied frequently, as the numerous manuscripts still in existence show.<sup>3</sup> Not very long after the invention of printing his story found expression in type. Then it became a call to others to go and see also. It is only a first voice in the dark-this word of Odoric-and long would it be ere another wayfarer should see the same relics of the past.

In the year 1472 the glorious republic of Venice dispatched an envoy to the Court of Uzun Hassan. His name was Josophat Barbaro, and he passed the same way as Odoric, but saw a little more, which he thus describes:

"Near the town of Camara is seen a circular mountain, which on one side appears to have been cut and made into a terrace six paces high. On the summit of this terrace is a flat space, and around are forty columns, which are called Cilminar, which means in our tongue Forty Columns, each of which is twenty cubits long, as thick as the embrace of three men; some of them are ruined; but, to judge from that which can still be seen, this was formerly a beautiful building. The terrace is all of one piece of rock, and upon it stand sculptured figures of animals as large as giants, and above them is a figure like those by which, in our country, we represent God the Father inclosed in a circle, and holding a ring in his hand; underneath are other smaller figures. In front is the figure of a man leaning on his bow, which is said to be a figure of Solomon. Below are many others which seem to support those above them, and among these is one who seems to wear on his head a papal miter, and holds up his open hand, apparently with the intention of giving his benediction to those below, who look up to him, and seem to stand in a certain expectation of the said benediction. Beyond this there is a tall figure on horseback, apparently that of a strong man; this they say is Samson, near whom are many other figures, dressed in the French fashion and wearing long cloaks; all these figures are in half relief. Two days' journey from this place there is a village called Thimar, and two days further off another village, where there is a tomb in which they say the mother of Solomon was buried. Over this is built an edifice in the form of a chapel, and there are Arabic letters upon it, which say, as we understand from the inhabitants of the place, Messer Suleimen<sup>7</sup> which means in our tongue Temple of Solomon, and its gate looks toward the east."<sup>4</sup>

Barbaro had not made much advance upon Odoric, but his account was not altogether fruitless, though soon to be superseded.

When Shah Abbas the Great, king of Persia, began his long and remarkable reign (1586) Persia was a dark land to European eyes. It was he who opened it freely to ambassadors from Europe, all of whom he treated with a magnificent courtesy. The first of these ambassadors to arrive in his kingdom came from the kingdom of Portugal, sent out by Philip III, king of Spain and Portugal. This man was an Augustinian friar, Antonio de Gouvea, who came with messages both of peace and of war. It was his aim to endeavor to carry Christianity among the Persians-a message of peace-but also to induce Abbas to make war on the Osmanli Turks. He was somewhat more successful in the second than in the first object, though he did establish an Augustinian society at the Persian court. After many and sore adventures at the hands of sea pirates he again saw his native land, and published an account of his adventures. In this story he tells of a visit to Persepolis, and in these terms

"We continued our journey as far as a village called Chelminira, which in their language means Forty Minarets, because that was the number in the tomb of an ancient king which stood there.... We went to see the tomb of which I have spoken, and it is my firm belief that the mausoleum which Artemisia erected to her husband was not more notable, though it is held as one of the wonders of the world; but the mausoleum has been destroyed by time, which seems to have no power against this monument, which has also resisted the efforts of human malice.... The place is between two high ridges, and the tomb of which I have made mention is at the foot of the northern ridge. Those who say that Cyrus rebuilt the city of Shiraz, affirm also that he built for himself this famous tomb. There are indications that Ahasuerus, or Artaxerxes, erected it for himself, besides another near it which he made for Queen Vashti; and this opinion is made more probable by the consideration of the short distance from this site to the city of Suzis, or Shushan, in which he generally resided.... At the foot of the ridge began two staircases facing one another, with many steps made of stones of so great a size that it will be beyond belief when I affirm that some of them, when they were first hewn, were more than twenty-five palms in circumference, ten or twelve broad, and six or eight high; and of these, there were very many throughout the whole structure, for the building was chiefly composed of them; and it was no small wonder to consider how they could have been placed one upon the other, particularly in the columns, where the stones were larger than in any other part. That which astonished us most was to see that certain small chapels were made of a single stone-doorway, pavement, walls, and roof.... The staircases, of which I have spoken, met on a broad landing, from which the whole plain was visible. The walls of the staircases were entirely covered with figures in relief, of workmanship so excellent that I doubt whether it could be surpassed; and by ascending the staircases access was gained to an extensive terrace, on which stood the forty columns which gave their name to

the place, each formed, in spite of their great size, of no more than three stones.... The bases might be thirty palms round, and on the columns were beautifully carved figures. The porches through which the terrace was entered were very high and the walls very thick; at each end stood out figures of lions and other fierce animals, carved in relief in the same stone; so well executed that they seemed to be endeavoring to terrify the spectators. The likeness of the king was drawn life-size upon the porches and in many other parts.

"From this place was an ascent to another much higher, where was a chamber excavated in the hillside, which must have been intended to contain the king's body, although the natives, imagining that it contained a different treasure, have broken into it, having little respect for the ancient memory of him who constructed it.

"The inscriptions-which relate to the foundation of the edifice, and, no doubt, also, declare the author of it--although they remain in many parts very distinct, yet there is none that can read them, for they are not in Persian, nor Arabic, nor Armenian, nor Hebrew, which are the languages current in those parts; and thus all helps to blot out the memory of that which the ambitious king hoped to make eternal. And because the hardness of the material of which it is built still resists the wear of time, the inhabitants of the place, ill treated or irritated by the numbers of visitors who came to see this wonder, set to work to do it as much injury as they could, taking as much trouble perhaps to deface it as the builders had done to erect it. The hard stone has resisted the effect of fire and steel, but not without showing signs of injury."<sup>5</sup>

From this narrative it is plain that the militant friar had learned more of the ruins than had Odoric or Barbaro. He no longer believes that Solomon had ought to do with them, but connects them with fair degree of exactness with the Persian kings. He also is more accurate and explicit concerning the inscriptions which he saw. They had already begun to exercise over his mind some little spell-a spell which was soon to hold a large part of Europe beneath its sway.

The next ambassador whom Philip III sent out to Shah Abbas was Don Garcia de Sylva y Figueroa, who likewise visited the great ruins. On his return to Isfahan he wrote a letter, in 1619, to the Marquess de Bedmar. It was written originally in Spanish, but immediately was done into Latin and published at Antwerp in 1620. This letter of a brilliant man completely superseded Gouvea's account, and evidently made a profound impression in Europe. Within five years it was translated into English, so receiving still greater publicity. His description of the ruins of Persepolis runs after this fashion:

"There are yet remaining most of those huge wilde buildings of the Castle and Palace of Persepolis, so much celebrated in the monuments of ancient writers. These frames do the Arabians and Persians in their owne language call Chilminara: which is as much as if you should say in Spanish Quarenta Columnas, or Alcoranas: for so they call those high narrow round steeples which the Arabians have in their Mesquites. This rare, yea and onely monument of the world (which farre exceedeth all the rest of the World's miracles that we have seen or heard of), sheweth it selfe to them that come to this Citie from the Towne of Xiria, and standeth about a league from the River Bandamir, in times past called Araxis (not that which parteth Media from the greater Armenia), whereof often mention is made by Q. Curtius, Diodorus, and Plutarch: which Authors doe point us oute the situation of Persepolis, and doe almost lead us unto it by the hand. The largenesse, fairnesse, and long-lasting matter of these Pillars appeareth by the twentieth which are yet left of alike fashion; which with other remaynders of those stately Piles do move admiration in the minde of beholders, and cannot but with much labour and at leisure be layed open. But since it is your Lordships hap to live now at Venice, where you may see some resemblance of the things which I am about to write of, I will briefly tell you that most of the pictures of men, that, ingraven in marble, doe seele the front, the sides, and statelier parts of this building, are decked with a very comely cloathing, and clad in the same fashion which the Venetian Magnificoes goe in: that is Gownes downe to the heeles, with wide sleeves, with round flat caps, their hair spread to the shoulders, and notably long beards. Yee may see in these tables some men sitting with great maiestie in certayne loftier chaires, such as use to bee with us in the Quires and Chapter--Houses of Cathedrall Churches, appointed for the seates of the chiefe Prelates; the seate being supported with a little foote-stoole neatly made, about a hand high. And, which is very worthy of wonder in so divers dresses of so many men as are ingraven in these tables, none cometh neere the fashion which is at this day, or hath bene these many Ages past, in use through all Asia. For though out of all Antiquitie we can gather no such arguments of the cloathing of Assyrians, Medes, and Persians, as we finde many of the Greekes and Romanes; yet it appeareth sufficiently that they used garments of a middle size for length, like the Punique vest used by the Turks and Persians at this day, which they call Aljuba, and these Cavaia and shashes round about their heads, distinguished yet both by fashion and colour from the Cidaris, which is the Royall Diademe. Yet verily in all this sculpture (which, though it be ancient, yet shineth as neatly as if it were but new-done) you can see no picture that is like or in the workmanship resembleth any other, which the memorie of man could yet attaine to the knowledge of from any part of the World:

so that this worke may seeme to excede all Antiquities. Now nothing more confirmeth this than one notable Inscription cut in a Jasper table, with characters still so fresh and faire that one would, wonder how it could scape so many Ages without touch of the least blemish. The Letters themselves are neither Chaldean, nor Hebrew, nor Greeke, nor Arabike, nor of any other Nation which was ever found of old, or at this day to be extant. They are all three cornered, but somewhat long, of the forme of a Pyramide, or such a little Obeliske as I have set in the margin (); so that in nothing do they differ from one another but in their placing and situation, yet so conformed that they are wondrous plaine, distinct and perspicuous. What kind of building the whole was (whether Corinthian, Ionick or mixt) cannot be gathered from the remaynder of these ruines: which is otherwise in the old broken walls at Rome, by which that may easily be discerned. Notwithstanding the wondrous and artificiall exactness of the worke, the beautie and elegancy of it shining out of the proportion and symmetrie, doth dazzle the eyes of the beholders. But nothing amazed me more than the hardnesse and durableness of these Marbles and Jaspers; for in many places there are Tables so solide, and so curiously wrought and polished that ye may see your face in them as in a glasse. Besides the Authors by me already commended, Arrianus and Justine make special mention of this Palace; and they report that Alexander the Great (at the instigation of Thais) did burne it downe. But most delicately of all doth Diodorus deliver this storie.

"The whole Castle was encompassed with a threefold circle of walls, the greater part whereof bath yielded to the time and weather. There stand also the sepulchres of their kings, placed on the side of that hill, at the foote whereof the Castle itself is built; and the monuments stand just so faire from one another as Diodorus reporteth. In a worke, all doth so agree with his discourse of it that he that bath seene this and read that cannot possibly be deceived."<sup>6</sup>

Sylva y Figueroa had evidently more interest in the peoples of the ancient Orient than in their languages. He had not given much attention to the inscriptions which he saw, and the idea of attempting to copy any of these strange characters never seems to have entered his mind. It was a pity that this did not occur to him, for the wide dissemination of his letter would have earlier introduced Europe to the idea that here was another great field for study. These mysterious signs would even then have attracted attention. But Europe was now soon to learn something of the appearance of these strange signs.

In the years 1614-1626 Pietro della Valle traversed a large part of Turkey, Persia, and India. On this journey he wrote "familiar" letters, which were in reality almost treatises upon geography, history, and ethnology, to a friend and physician, Illario Schipano, at Naples. In passing through Persia he visited the ruins of Persepolis, once the capital of ancient Persia. Here he marked that the city was surrounded upon three sides by mountains which broke off abruptly, leaving smooth precipice surfaces around it. Upon this smooth rock in a number of places he found strange marks, evidently made by the hand of man, and intended to paean something. What language this might be or what letters he had no idea. In a letter written October 21, 1621, he described the appearance of these strange signs, and even went so far as to copy down into his letter a few of them:<sup>7</sup>



and that without very great exactness. Commenting upon these signs, he remarks that in the second one of them, consisting of three strokes down. ward and one pointing toward the right, there seemed to be indications that it was made from left to right, and not from right to left. He had thus already begun to speculate upon the question as to whether this unknown language was read from right to left, as were most of the oriental tongues of which he had knowledge, or whether it was to be read, like the European languages, from left to right. On the ground already alleged, and upon other grounds which he then proceeds to state, he decided that this tongue was really to be read from left to right. The appearance of these few signs in his published letters were the first sight which Europe gained of the appearance of the written language of ancient Persia. His letters were repeatedly reprinted and must have had an extensive circulation. So came the learned of Europe to know that the ancient Persians had carved some sort of language on the rocks at Persepolis, but what these signs might mean none knew, and there was apparently no clue to their meaning. But to Pietro della Valle belongs the honor of beginning the long line of men who contributed little by little toward the reading of Assyrian and Babylonian books.<sup>8</sup>

Pietro della Valle was, however, not long left in possession of the honors of primacy in his examination of Persepolis. In 1627 Sir Dodmore Cotton, accredited to the Persian court as ambassador, sailed away from England, In his suite was a boy of nineteen years of age, by name Thomas Herbert. The party landed at Gombrun, Persian Gulf, on January 10, 1627-8, and thence proceeded

to Ashraff for an audience with the king. They later visited Mount Taurus and Casbin, where Cotton and Sir Robert Shirley, who was also in the suite, died, and Herbert was left free to continue his travels. Herbert saw much of Persia and of Babylonia before reaching England at the end of 1629. In 1634 he published an account of these travels and devoted a few pages to Persepolis and Chilmanor.<sup>9</sup> In his description he is very entertainingly discursive concerning the "Images of Lions, Tygres, Griffins, and Bulls of rare sculpture and proportion"<sup>10</sup> which he saw there, but he says not a word about inscriptions. In 1638 he issued a second edition, considerably enlarged, in which Persepolis receives more attention, and is introduced in quaint and enthusiastic phrase, thus:

"Let us now (what pace you please) to Persepolis, not much out of the road: but were it a thousand times further, it merits our paines to view it; being indeed the only brave Antique Monument (not in Persia alone) but through all the Orient."<sup>11</sup>

In this edition he comes up to the question of inscriptions, and so alludes to them:

"In part of this great roome (not farre from the portall) in a mirrour of polisht marble, wee noted above a dozen lynes of strange-characters, very faire and apparent to the eye, but so mystical], so odly framed, as no Hieroglyphick, no other deep conceit can be more difficultly fancied, more adverse to the intellect. These consisting of Figures, obelisk, triangular, and pyramidall, yet in such Simmetry and order as cannot well be called barbarous. Some resemblance, I thought some words had, of the Antick Greek, shadowing out Ahasuerus Theos. And, though it have small concordance with the Hebrew, Greek, or Latine letter, yet questionlesse to the Inventaer it was well knowne; and peradventure may conceale some excellent matter, though to this day wrapt up in the dim leafes of envious obscuritie"<sup>12</sup>

Even here Herbert did not cease the work of elaborating his description of Persepolis. He did, however, rest a few years, and in that time another traveler had seen the ruins. This was J. Albert de Mandelslo, a member of an "Embassy sent by the Duke of Holstein to the great Duke of Muscovy and the King of Persia," who traveled in the East 1638-1640. The account of his wanderings was written down by Olearius, secretary to the embassy, and an English translation appeared in 1662. Mandelslo also described the columns as usual and then added this statement:

"Near these chambers may be seen, engraven upon a square pillar, certain unknown characters, which have nothing common with either the Greek, Hebrew, or Arabian, nor indeed with any other language. There are twelve lines of these characters, which, as to their figure, are triangular, Piramidal, or like obeliskes, but so well graven and so proportionate, that those whot did them cannot be thought Barbarians: Some believe, they are Telesmes, and that they contain some secrets which Time will discover."<sup>13</sup>

In 1677 Herbert issued the fourth impression of the account of his travels. In this he devotes still more space to Persepolis and its inscriptions, and it is altogether probable that he was moved to this by Mendelslo's book, and being desirous that he should not lose the credit of being first to publish a copy of the inscriptions, he includes a specimen plate. In its revised form the account deserves quotation here:

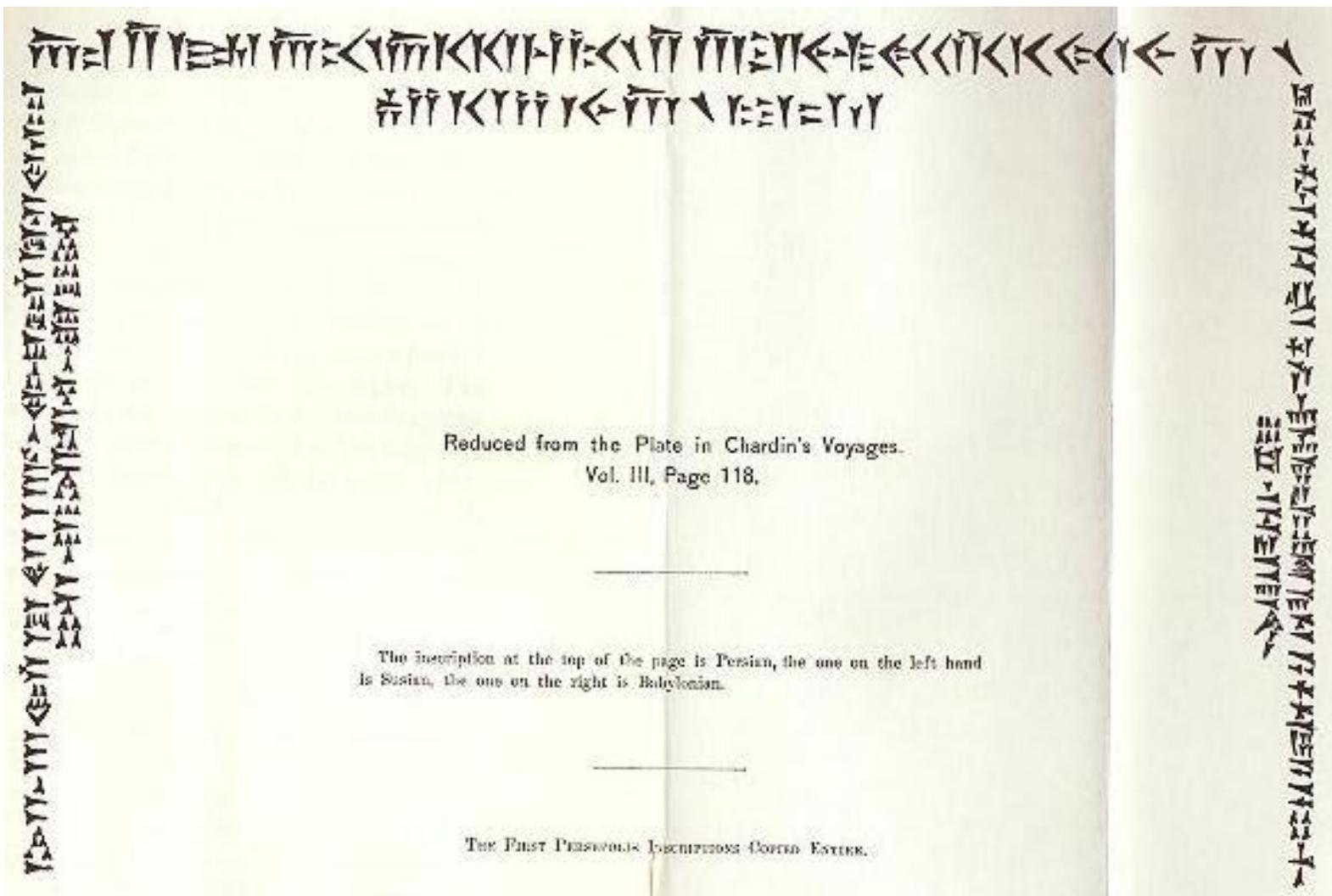
"Adjoyning these toward the West is a Jasper or Marble Table about twenty foot from the pavement, wherein are inscribed about twenty lines of Characters, every line being a yard and a half broad or thereabouts; all of them are very perfect to the eye, and the stone so well polished that it reserves its lustre. The Characters are of a strange and unusual shape; neither like Letters nor Hieroglyphicks; yea so far from our deciphering them that we could not so much as snake any positive judgment whether they were words or Characters; albeit I rather incline to the first, and that they comprehended words or syllables, as in *Brach-yography* or Short-writing we familiarly practise nor indeed could we judge whether the writing were from the right hand to the left, according to the *Chaldee*, and usual manner of these Oriental Countreys; or from the left hand to the right, as the Greeks, Romans and other Nations imitating their Alphabets have accustomed. Nevertheless, by the posture and tendency of some of the Characters (which consist of several magnitudes) it may be supposed that this writing was rather from the left hand to the right, as the *Armenian* and *Indian* do at this day. And concerning the Characters, albeit I have since compared them with the twelve several Alphabets in *Postellus*, and after that with those eight and fifty different Alphabets I find in *Purchas*, most of which are borrowed from that learned Scholar Gromay, which indeed comprehend all or most of the various forms of letters that either now or at any time have been in use through the greatest part of the Universe, I could not perceive that these had the least resemblance or coherence with any of them: which is very strange, and certainly renders it the greater curiosity; and therefore well worthy the scrutiny of some ingenious Persons that delight themselves in this dark and difficult Art or Exercise of deciphering. For, how

obscure so ever these seemed to us, without doubt they were at some time understood, and peradventure by Daniel, who probably might be the surveyour and instruct the Architector of this Palace, as he was of those memorable Buildings at Shushan and Eebatan; for it is very likely that this structure was raised by Astyages or his Grandson Cyrus; and is acknowledged that this great Prophet (who likewise was a Civil Officer in highest trust and repute during those great revolutions of State under the mighty Monarchs Nebuchodonosor, Belshazzar, Astyages, Darius, and Cyrits) had his mysterious Characters: So as how incommunicable so ever these Characters be to us (for they bear the resemblance of pyramids inverted or with bases upwards, Triangles or Delta's, or (if I may so compare them) with the Lamed in the Samaritan Alphabet, which is writ the contrary way to the same letter in the Chaldee and Hebrew), yet doubtless in the Age these were engraven they were both legible and intelligible; and not to be imagined that they were there placed either to amuse or to delude the spectators; for it cannot be denied but that the Persians in those primitive times had letters peculiar to themselves, which differed from all those of other Nations, according to the testimony of a learned Author, *Persae proprios habebant Characteres, qui hodie in vestigiis antiquorum Monumentorum vix inveniuntur*. However, I have thought fit to insert a few of these for better demonstration



which nevertheless whiles they cannot be read, will in all probability like the Mene Tekel without the help of a Daniel hardly be interpreted."<sup>14</sup>

These quotations from the successive editions of Herbert show a book in the very process of growth, but they unfortunately do not show much development of the author's knowledge. Herbert had, however, in the fourth impression consulted his notes to greater advantage, and brought forth from them some copies of cuneiform signs. These were the first that had been published in England, but unhappily they did not form a complete inscription. The first two lines come from one inscription, and the third from another, and the copying was not very well done. It was a pity that Herbert had not taken the time and pains necessary to make a complete as well as a correct copy of one inscription however small. That would have been a genuine contribution to learning. As it happened Herbert's book contributed nothing of scientific importance to the pursuit of knowledge concerning the East. It is, however, certainly true that this entertainingly written narrative play have influenced later work by arousing fresh interest in the ruined palaces, and the mystic inscriptions at Persepolis.



The copies of a few signs by Pietro della Valle and by Herbert, however, aroused no special interest, and there was in reality hardly enough of these signs even to awaken curiosity.

In the same manner the few signs which an English traveler, Mr. S. Flower, copied and published in England failed of arousing any interest in the rocks and their inscriptions at Persepolis.<sup>15</sup>

The first real impulse to an attempt at unraveling the secrets of Persepolis was given by Sir John Chardin. Born at Paris in 1643, and early a wanderer, this man, after long voyages, saw the rocks at Persepolis<sup>16</sup> Many things he had learned in his journeyings, and among them had found how important it was to make copies of inscriptions, whether one could read them or not. He was the first to copy one of these little Persian inscriptions entire. When this was published<sup>17</sup> it was at last possible for students to see some of the peculiarities of this method of writing. It was now plainly seen that the characters were made up of little wedges and arrowheads-of which the latter were formed by the combination of two of the former. By combinations of these wedges and arrowheads the most complex-looking signs were produced. In all of them this one abiding rule seemed to be followed, that the wedges always pointed to the right or downward, and that the arrowheaded forms were always open toward the right. The prevalence of this rule seemed to confirm the guess already hazarded more than once that the language was really to be read from left to right. But, though Chardin's published inscription awakened, for the first time, some genuine interest in the matter, there was found no man so bold as to essay a decipherment of the enigmatic signs.

After Chardin the next man to see the ruins of Persepolis was Jean Baptiste Tavernier, who was, however, too much interested in himself and in his reception by the king to pay much attention to the past and its great monuments. But in a short time there came another traveler who was interested in the past more than the present. On June 13, 1693, Giovanni Francesco Gemelli-Carreri started away from Naples to make the circuit of the globe, and to the same city he returned December 3, 1699, having

accomplished the task. In 1694 he was in Persia and naturally visited the ruins of Persepolis. He is very explicit in his statements as to how he traveled to the ruins and is careful in reporting the dimensions of everything which he saw. After some preliminary description he makes some statements about the inscriptions in this form

"On the South Side outwards there is an Inscription cut on an empty space 15 spans long, and 7 broad, in such a character that there is now no understanding Person in the World that can make anything of it. It is neither Caldee, nor Hebrew, nor Arabick, nor Greek, nor of any of those Languages the Learned have Knowledge, but only Triangles of several Sorts, severally plac'd, the various placing whereof perhaps formed divers words, and express'd some Thoughts. The most receiv'd Opinion is, that they are Characters of the ancient Goris, who were Sovereigns. of Persia; but this is not easily to be made out, the Goris themselves being at present very ignorant as to their Antiquities, and unfit to give any Judgment of such things....Not far off on a. Pilaster of the same black marble, is an Inscription in the same Character, and another on such another Stone; which I observing, and remembering those I had seen before, began to consider with myself, how easily human Judgment is mistaken, and how different things happen, to what Man proposes to himself; for whereas the Author thought by means of those inscriptions to have eterniz'd his Memory with Posterity, which the beauty of the work well deserv'd, yet quite the contrary we see is fallen out....

"Such precious Remains of Antiquity well deserve to be cut in Copper for the satisfaction of the Ingenious, before they are quite lost through the fault of the natives; but it is a difficult matter to draw above two thousand Basse Relieves, and a vast charge to print them. The Reader therefore will think it enough that I have drawn the Plan of the Palace, with some of the principal Figures; that there may be some knowledge of the several Habits of the antient Persians; and two lines of twelve there are in the inscription on the Pilaster of the first Floor; perhaps hereafter some more fortunate searcher into the oriental languages may employ his wit on it.

"Having very well spent all the Day in seeing and distinctly observing the best part of those Antiquities, I returned, and was scarce come to the place where I had left my Armenian Servant before I hear'd him as'k me whether I had found the Treasure; he believing the Inscriptions were in Portugese, and that I had Read them and taken the Treasure, as the Carvansedar had told him; which made me laugh heartily all the Way."

By the side of this narrative Carreri presents a copperplate illustration of the platform at Persepolis, showing the columns of the palace still standing in front of the mountain. Above this picture are two lines of inscription as follows:



[Reproduced in the same size as the copy given in Churchill's republication of Carreri's narrative.<sup>18</sup>]

It is evidently the purpose of Carreri to leave upon the reader's mind the impression that he had copied these characters himself. This, however, is certainly not true. A slight examination and comparison reveal the fact that these two lines are made up out of the three lines of Herbert, with but slight changes. Here, then, is a clear case of deception proved at once upon the Neapolitan. He has borrowed, and that rather stupidly, from his English predecessor. In this matter, at least, he has made no contribution to the search for facts about records at Persepolis. To make the matter rather worse, the picture of the platform at Persepolis, which he gives beneath his plate of inscriptions, is also borrowed without acknowledgment. It had already appeared in Daulier-Deslandes.<sup>19</sup>

His punishment has been severe. It has even been this, that men have been moved to say that Carreri copied much more than the plate of inscriptions and the Plan of Persepolis; that he copied, indeed, everything in his book, and had never been absent from Naples at all, nor had seen anything which he describes. This is, however, an excess of skepticism. He doubtless borrowed much from his predecessors, a common habit then, and not altogether unknown among travelers even now, but there is really no reason to believe that the whole of Carreri's narrative was fictitious.

But that question aside, the book of Carreri is of importance in the history of decipherment; not indeed that his copy or his description was of any practical use, but because his book was widely read in Europe, and had its share in keeping alive the interest in Persepolis and in stimulating more. And that was no mean service.

The slow assaults upon these inscriptions at Persepolis were now becoming international. The Spanish, Italians, English, and French had all made their observations. It was now in order that a German, Engelrecht Kaempfer, should make his contribution to the unraveling of the mystery. Kaempfer was a physician, born and trained in Germany, but largely become a Hollander by residence and service. He had already made important contributions to science through long residence in Japan, where he had studied the botany and then the manners, customs, and the history of that then unknown land. From the mystery of Japan he turned to the mystery of Persia, and not knowing exactly what he did, copied again the little three-line inscription which Chardin had already prepared for publication. That would have been no new contribution to the work had he gone no further, but he made a gain by publishing for the first time a long inscription, which was not in old Persian at all, but in Assyro-Babylonian.<sup>20</sup> The difference between the two inscriptions he does not appear to have noticed, and he certainly did not know in what language or languages these texts might be written. The longer inscription appears to have interested him most, and upon this he made some observations which sprang naturally out of his former studies in Chinese and Japanese. His question was in simplest form this: Have we in these strange-looking inscriptions a language written in alphabetic, in syllabic, or in ideographic characters Or, in another form; do these little wedge-shaped signs represent in each case a letter, a syllable, or a word? His decision was that the signs were ideographic, each of them representing an idea or a word. If he had reference in this judgment only to his longer inscription, and not to the smaller one at all, his decision was correct, and may very possibly have influenced those who came after him to a proper decision at the beginning of their researches.

Kaempfer spent the later days of his life in the Netherlands. His work might almost entirely be claimed as Holland's contribution to this international enterprise if there were any need so to do. But Holland was now to make its own direct contribution through one of its own sons, Cornelis de Bruin, who visited the ruins in 1704, and also copied inscriptions there. Ten years later an account of his travels over Moscovia, Persia, and India was published in sumptuous style in Amsterdam. In this new work there were reproduced two inscriptions in a threefold form. In reality the threefold form was later discovered to be three languages, but Bruin believed that he had really published six inscriptions, and not merely two inscriptions repeated in three languages. Bruin reproduced two other inscriptions each in a single language. Bruin's book was first published in Dutch,<sup>21</sup> but afterward appeared in French.<sup>22</sup> Its influence upon the progress of these studies was surprisingly small. The very costliness of its magnificent original publication might have made it accessible to few, and in this there is possibly some explanation of its slight influence. But the French edition, in a language more extensively used, and in a form more simple, must have had a considerable circulation. Yet even from this there came no impulse. Europe looked idly over the plates in which these strange characters appeared and apparently made no attempt to get at their secret. They were still matters of curiosity, but their publication at all was an achievement which could not be permanently fruitless. The restless spirit of man would be in pursuit of them shortly, and then each line published by one traveler after another would be eagerly scanned, and every single suggestion or hint weighed and considered. Other travelers planning to visit these same lands in the age before guidebooks, would read the accounts of their predecessors, and, inspired by them, would go to see the same ruins and to bring back more complete copies of these little inscriptions. In this was the chief hope for the future. All the copies which were yet made were too brief to offer a good chance for translation, or even decipherment. They were furthermore inaccurate in very important matters. There could be no hope of a successful decipherment until the quiet scholar in his library had copies in which every line, every wedge, every little corner, was accurately reproduced. The improvement in this respect had thus far not been great. The gain had been chiefly in the number of texts offered. If the proposition made by the Royal Society of London, when Mr. Flower's copies were first presented, in 1693, had been followed, and a complete copy made of all these inscriptions by a competent hand, the attempts to decipher would have undoubtedly been made much earlier than they did.

In this story of a slow-moving effort at decipherment the small must find its mention along with the great; and there is need to turn for a moment from Persepolis to mention the publication made in 1762 of a beautiful vase.<sup>23</sup> Upon this were inscribed at the upper part one long line of cuneiform characters, followed by a shorter line of the same. By the side of this shorter line were some hieroglyphic characters. Like the publications which preceded it, this also failed of any influence upon the progress of research at this time. The hieroglyphic signs were not yet deciphered, for the Rosetta stone had not yet been found by Napoleon's soldiers as they threw up their breastworks. If the Egyptian could have then been read, men would certainly have seized upon this little vase as containing a clue to the decipherment of the cuneiform characters. It would then have appeared as a bilingual text, in which the Egyptian formed one part and the cuneiform the other. By this means Egyptian would have become the mother study for Assyrian. Later this vase played a part both in Egyptian and in Assyrian studies, and then it became known that, like the monuments at Persepolis, the two lines of cuneiform texts were in reality written in three separate languages. The publication of the inscriptions on the vase was made by the French. So were the European nations, one by one, giving their share of time and labor to the international work. The greater ones among them had now done something, the smaller had yet hardly begun. One of these, the people of Denmark, was now to begin making contributions of great importance which should carry the investigations far beyond anything that had yet been attained. In the month of March, 1765, the ruins of Persepolis were visited by Carsten Niebuhr. He, like some of his predecessors, had had long experience of travel, and, unlike the others, was a man of exact and methodical habits of work. He had, furthermore, prepared for just this work by a perusal of Bruin and Chardin, and apparently, also, even by the reading of Pietro della Valle. The references which he gives to the two former show the continuity of study and indicate afresh how much these early voyagers had really accomplished, even when their work appeared to count for little at the time. Niebuhr's description of the ruins of Persepolis makes careful note of the changes which had come to the ruins by the ravages of time and the hand of man since Bruin had seen them, and then hurries on to the real matter which most concerned him. His distinguished son has thus set forth the enthusiasm and the methods of Niebuhr in these

researches:

"These ruins, inscriptions, and bas-reliefs had been sufficiently well represented by three former travelers to arouse the attention of Niebuhr as the most important monument of the East. The number of inscriptions and sculptures made him hope that an interpreter might be found who, by comparing them, would be able to understand them, if once correct copies of them were placed before him; and Niebuhr's keen eye told him how insufficient the drawings hitherto published were. Nothing out of all that he saw in Asia attracted him so powerfully in anticipation; he could not rest until he had reached Persepolis, and the last night saw him sleepless. The remembrance of these ruins remained ineffaceable all his life long; they were for him the gem of all that he had viewed.

"Three weeks and a half he remained beneath them, in the midst of a wilderness; and during this time he worked without interruption at the measurement and drawing of the ruins. The inscriptions are placed high up on the walls, and were clearly to be distinguished only when the sun shone upon them; as in this atmosphere the hard, originally polished marble is not weatherworn, his eyes, already affected by the uninterrupted work, were dangerously inflamed; and this, as well as the death of his Armenian servant, obliged him, much against his will, to leave the old Persian sanctuary before he had completed his drawings."

It would seem from this that it was the design of Niebuhr to copy every inscription which he could find at Persepolis. That would have been a great task indeed. Even without this completeness he achieved a result attained by no one who had preceded him. He republished several of the texts which Bruin and Kaempfer had published before him, but in a form far excelling them for accuracy. To these he added four texts which had not before appeared in any work. But Niebuhr made other contributions besides merely reporting the state of the ruins and giving copies of the inscriptions. His long journeyings ended in Denmark on November 20, 1767. A certain amount of leisure was now secured, and while writing the narrative of his travels<sup>24</sup> for the press he went over these little inscriptions and made some discoveries concerning them. It was in the first place clear to him that the conjectures of earlier students, that this writing was to be read from left to right, were correct. That was a good point of approach, and with that in mind he compared all his copies and soon determined that in them there were really three separate systems of writing. These three systems were always kept distinct in the inscriptions. In one of them the little wedges were not so complex in their combinations, in the second the complexity had some-what increased, while in the third it had become much greater. He did not, however, come to what now seems a natural conclusion, that three languages were here represented. He held rather to the view that the proud builders of Persepolis had carved their inscriptions in a threefold form, the same words being written in more complicated characters. Having come thus far, he made still another step in advance. He divided these little inscriptions into three distinct classes, according to the manner of their writing, calling them Class I, II, and III. He then arranged all those, which he had copied, that belonged to Class I, and by careful comparison decided that in them there were employed altogether but forty-two (42) signs. These he copied out and set in order in one of his plates.<sup>25</sup> This list of signs was so nearly complete and accurate that later study has made but slight changes in it. When Niebuhr had made his list of signs he naturally enough decided that this language, whatever it might be, was written in alphabetic characters. This much was finally determined, and future investigation would not overthrow it. Far beyond all his predecessors had Niebuhr gone. It is a pity that he was not able to go still further and essay the decipherment of one of these little inscriptions of the first class. For this, however, he did not possess the requisite linguistic genius, nor had he at command the various historical data necessary for its solution. He had given the world the material in a new and substantially correct form, and he had pointed out the proper place to begin; the rest must be left for another.

For just this which Niebuhr had furnished the learned world had been waiting. The words of Bruin and Chardin had awakened no scholar to attempts to decipher the texts which they had copied, simply because so little had been offered by them. Soon after the richer store of Niebuhr had been published, two scholars were at work seriously attempting to decipher these texts. The first was Olav Gerhard Tychsen, professor of oriental languages in the University of Rostock, in Germany; the other was Friedrich Minter, the Danish academician of Copenhagen. Tychsen made a very important discovery in the beginning of his researches, that remained to guide future workers. He observed that there occurred at irregular intervals in the inscriptions of the first class a wedge that pointed neither directly to the right nor downward, but inclined diagonally. This wedge Tychsen suggested was the dividing sign used to separate words.<sup>26</sup> This very simple discovery later became of very great importance in the hands of Minter. Of more general importance was his statement that "all the inscriptions of Niebuhr, with a single exception, are trilingual."<sup>27</sup> In that sentence spoke a linguist; the previous workers had been travelers, men of science, men of skill. The matter was now in the hands of men accustomed to deal with languages, and the promise of ultimate success was yearly growing brighter. The rest of Tychsen's work was not of enduring character. He argued wrongly as to the age of the buildings at Persepolis, and reached the erroneous conclusion that these inscriptions had been written during the Parthian dynasty (246 B. C.-227 A. D.). This error in history vitiated his promising attempt at the decipherment of one small inscription which had been found above the figure of a king. He rendered it thus:

"This is the king, this is Arsaces the great, this is Arsaces, this is Arsaces, the perfect and the king, this is Arsaces the divine, the pious, the admirable hero."<sup>28</sup>

But a later investigator was to show that this was not an inscription of Arsaces at all, and that scarcely a word of it had been correctly

rendered. This statement makes the work of Tychsen appear almost abortive, but such a judgment would not be just. He had indeed failed in the greater effort, but in making that he had, nevertheless, gained several smaller steps, and at the place thus attained another might begin and travel farther.

Minter was more fortunate than Tychsen in his historic researches, and that made him also more successful in his linguistic attempts. He rightly identified the builders of Persepolis with the Achaemenides, and so located in time the authors of the inscriptions. This was great gain, the full force of which he was not able to appreciate nor to utilize. He also agreed with the judgment of the former workers that the texts were to be read from left to right, and was beyond them in his full recognition of three languages, of which the last two were translations of the first. Independently of Tychsen, he recognized the oblique wedge as the divider between words, and was able to go far beyond this, even to the recognizing of the vowel "a" and the consonant "b." This was the first sure step in the decipherment. From our present point of view it may sound small, but it is to be remembered that it was made without the assistance of any bilingual text, taken bodily out of the darkness and gloom which had settled over this language centuries before. It was an achievement far exceeding that of the decipherment of the Egyptian hieroglyphics, which was secured by the aid of a bilingual text containing Greek. The name of Minter may well be held in honor among all who covet knowledge of the past of the Orient.

With the material which Minter had it would have been difficult to go farther, but events were now to make accessible to another man of genius, adapted to such work, new material which would greatly simplify the labor of decipherment. This new material did not directly concern the inscriptions of Persepolis, but it did cast welcome light upon them. It is connected with three great names in the annals of oriental studies, and romantic in its personal, as in its scientific connections.

In the year 1731 there was born at Paris a boy whose parents gave him the name of Abraham Hyacinthe Anquetil-Duperron, and destined him to the priesthood. In the seminary studies, carried on for this purpose, the young man learned Hebrew, and that introduced him to the fascination of the oriental world, as it has many another since his day. His soul forgot its dedication to the priesthood and became absorbed in oriental study at the Royal Library of Paris. Here he attracted the notice of Abbe Sallier, who secured for him a small stipend as a student of Arabic and Persian. In that treasure-house of human knowledge there fell into his hands a few leaves of an oriental manuscript, in which were written words sacred in the religion of Zoroaster. The language best known as Avestan, but long erroneously called Zend, he could not read, and his soul burned with longing to learn what these strange characters should be, and what the language which they expressed. He determined, even in his hopeless poverty, to get out to India, there to learn from the priests of Zoroastrianism the language of their sacred books. The times were troubled; war was likely at any time to begin between France and England in India, and even now French troops were about to be dispatched thither. With these lay his only hope of reaching the land of his dreams. He enlisted as a common soldier, but before he had sailed from L'Orient his friends had appealed to the minister, who gave him a discharge, provided free passage, with a seat at the captain's table, and ordered a salary paid him on arrival at his destination. He landed, on the 10th of August, 1755, at Pondi-cherry, and waited a short time to study modern Persian, and later at Chandernagore to study Sanskrit. When the war broke out between France and England he suffered terrible privations. At last his reward came at Surat, where he ingratiated himself with the priests and acquired enough knowledge of the language to translate the dictionary Veditad-Sade and other works. In May, 1762, he arrived at Paris poor and exhausted, but laden with oriental manuscripts to the number of one hundred and eighty. Out of this store he published in 1771 the Zend-Avesta, which brought to Europe its first sight of the sacred books of the followers of Zoroaster. This publication was of immense value to the study of religion and of history, but it was now destined to exert another potent influence. The linguistic collections of Anquetil-Duperron were organized and systematized by Eugene Burnouf, and it was this fact that was to have an important bearing upon the study of the inscriptions of Persepolis.

After Anquetil-Duperron and Eugene Burnouf there is to be added the name of Silvestre de Sacy, the greatest Arabic scholar of his age, as one who, without intending so to do, cast a valuable side light upon Persepolitan research.

In Persia travelers had long been noticing inscriptions written during the Sassanian period in the Pehlevi character (227-641 A. D.). In the years 1787-1791 Sylvestre de Sacy, who was later to lay the foundations of Arabic philology on which its present structure is still standing, began the decipherment of these inscriptions, and soon conquered their mystery sufficiently to gain at least their general sense. He found that they had a stereotyped form from which there was scarcely ever a departure, and that they run about in this style:

"N., the great king, the king of kings, the king of Iran and Aniran, son of N., the great king, etc." That discovery had its own importance in its own field, but, like the work of Duperron and Burnouf, it was now to be applied to other uses by a man whose aim was to decipher much older inscriptions.

If now we look back over this long story, reaching from the earlier part of the fourteenth century down to the very beginning of the nineteenth, and gather up the loose threads of our story, we shall be the better able to understand the method and the results which were now to be revealed.

Out of Persepolis, by the combined efforts of a long line of travelers, Italian, Spanish, Dutch, German, English, Danish, and Portuguese, there had been brought to Europe copies of some little inscriptions written in cuneiform characters. It had already been learned concerning them that they belonged to the age of the Achaemenides, that they were written in three languages, of which the first was ancient Persian, that this ancient Persian was almost, if not quite wholly, an alphabetic language, with possibly some syllabic signs, and that of these alphabetic signs two, namely, "a" and "b," were almost certainly made out, while of some others possible or even probable meanings were suggested. To this were now to be added two valuable side lights. The decipherment of the Avestan language had supplied the grammatical structure and much of the vocabulary of a language spoken over the very same territory as that in which Persian had formerly held dominion. It was exceedingly probable that it had taken up many words, with some changes, from the more ancient tongue which scholars were now trying to decipher. It was likely, also, to represent in its grammatical structure, in its declensions or conjugations, some reminiscence of old Persian. In grammar, syntax, or lexicon of Avestan there was a good hope of finding something that might be made useful to the decipherer. Some of this material was accessible to Tychsen and to Munter, but they had not known how to use it with best effect. There is a gift for deciphering, as there is a gift of tongues. But not only from this work of Duperron and Burnouf was there new material; valuable hints might be had from the discoveries of De Sacy concerning the inscriptions of Sassanian kings. The style in which the Sassanian kings wrote their inscriptions was very probably copied from the style in which the older Achaemenides had written. That was not certain, but as a hypothesis upon which to work it might prove useful.

In this we have shown what the material was, what the problem, and what the essays made for its solution, and now there was a call for a man able to practice a method by which all that existed of fact or of hypothesis could be brought to bear, and the successful result be achieved. But even while this preliminary work was going on the genius who should achieve the result was preparing.

## CHAPTER II

### GROTEFEND AND RAWLINSON

IT were difficult, if not impossible, to define the qualities of mind which must inhere in the decipherer of a forgotten language. He is not necessarily a great scholar, though great scholars have been successful decipherers. He may know but little of the languages that are cognate with the one whose secrets he is trying to unravel. He may indeed know nothing of them, as has several times been the case. But the patience, the persistence, the power of combination, the divine gift of insight, the historical sense, the feeling for archaeological indications, these must be present, and all these were present in the extraordinary man who now attacked the problem that had baffled so many.

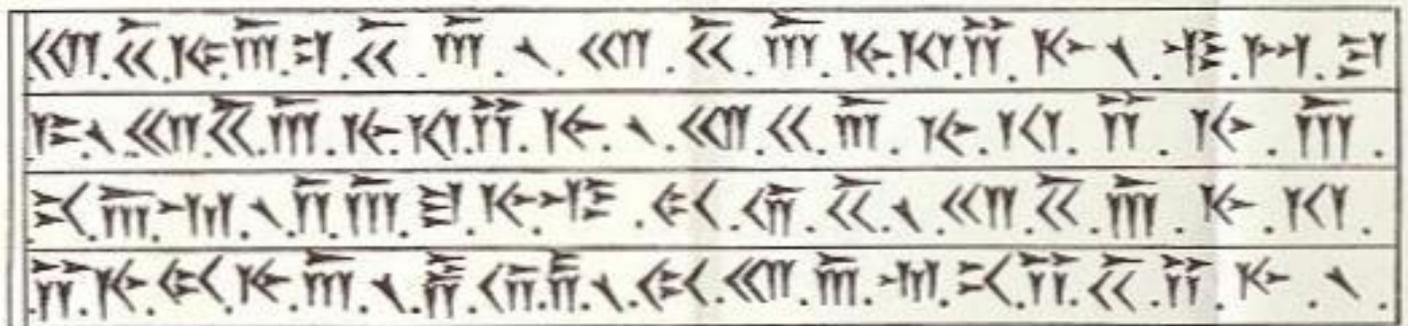
On June 9, 1775, Georg Friedrich Grotefend was born at Munden, in Hanover, Germany. He was destined to become a classical philologist, and for this purpose studied first at Ilfeld and later at the University of Gottingen. Here he attracted much attention, not only as a classical scholar of promise, but also as an ingenious man with a passion for the unraveling of difficult and recondite questions. He formed the friendship in Gottingen of Heyne, Tychseu, and Heeren. On the recommendation of the first named, he was appointed in 1797 to an assistant mastership in the Gottingen Gymnasium. Two years later appeared his first work, which brought him reputation and a superior post in the Gymnasium at Frankfort-on-the-Main. Up to this time he had given no attention to the study of oriental languages. But in 1802 his friend, the librarian Fiorillo, drew the attention of Grotefend to the inscriptions on Persepolis, and placed in his hands all the literature which had hitherto appeared.

I.



\* NIEBUHR TAB. 24. B.

II.



\* NIEBUHR TAB. XXIV. G.

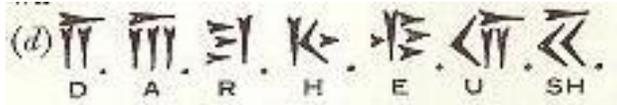
INSCRIPTIONS DECIPHERED BY GROTEFEND.

\* From Niebuhr's *Reisenschreibung nach Arabien und andern nachgelegten Ländern*. Kopenhagen, 1774-1804, Band II, p. 124. Tab. XXIV.

Grotefend was at once enlisted, and, though he had no oriental learning, set himself to the work, probably little dreaming of how many years of his life would be spent upon these little inscriptions or upon the work which grew out of them. His method was exceedingly simple,<sup>29</sup> and may be made perfectly clear without the possession of any linguistic knowledge. His fundamental principles and his simplest facts were taken over bodily from his predecessors. He began with the assumption that there were three languages, and that of these the first was ancient Persian, the language of the Achaemenides, who had erected these palaces and caused these inscriptions to be written. For his first attempts at decipherment he chose two of these old Persian inscriptions and laid them side by side. The ones which were chosen were neither too long nor too short; the frequent recurrence of the same signs in them seemed to indicate that their contents were similar, and finally they were clearly and apparently accurately copied by Niebuhr. The inscriptions thus selected were those numbered "B" and "G" by Niebuhr (see plate), which, for the purpose of this exposition, may be designated simply as first and second (I and II). Following Tychsen and Munter, he held that these inscriptions, which accompanied figures of kings, were the titles of these monarchs, and were presumably similar to the inscriptions of Sassanian kings which De Sacy had just deciphered. Grotefend placed these two inscriptions side by side and carefully examined them. In the work of Ivliinter a word had been pointed out which appeared frequently in these inscriptions, sometimes in a short form and some. times longer, as though in the latter case some grammatical termination had been added to it. In these two inscriptions this word appeared both in the shorter and in the longer form. Grotefend was persuaded that this word meant king, as Minter had discovered, and that when it appeared twice in each of these texts in exactly the same place, first the shorter and then the longer form, the expression meant "king of kings." A glance at the plate will show that in these two inscriptions, in the second line, after the first word divider, appear the two sets of signs exactly alike, thus:



names of the Achaemenides to find three names which should suit. The first names thought of were Cambyses, Cyrus, and Cambyses. These will, however, not do, because the name of the grandfather and grand. son are exactly alike, whereas on the two inscriptions they are different. The next three to be considered are Hystaspes, Darius, Xerxes. If these be correct, then the seven signs with which I begins must be the name Darius (see d above). The next thing in order was to find the form of the name Darius in ancient Persian. Of course Grotefend did not expect to find it written in that way exactly, for the modern European spelling has come to us from the Greek, and the Greeks were not careful to reproduce exactly the names of other peoples who were, in their view, only barbarians. He ascertained from the Hebrew lexicon that the Hebrews pronounced the word Daryavesh, while Strabo in one passage, in trying to represent as accurately as possible the Persian form, gave it as Dareiaves. Neither of these would work very well into the seven characters, and on a venture Grotefend gave the word the form of Darheush, and so the first word was thus to be set down

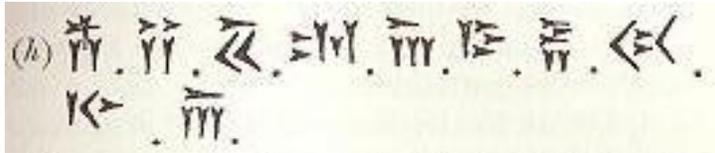


That seemed to fit well enough, and as later investigations have shown, it was almost wholly correct, there being only errors in H and E, which did not vitiate the process, nor interfere with carrying it out further. The next task was to make out the name at the beginning of II. This was comparatively easy, for nearly all these same letters were here again used, and only the first was wanting. It was easy to supply this from the Hebrew form of the name and also from the Avestan language so recently deciphered. This name was therefore read thus:

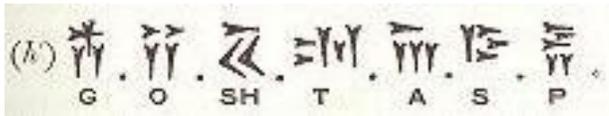


The error in this also was exceedingly slight, when one considers the extreme difficulty of the task and the comparative bluntness of this tool of conjecture or surmise or, to put it boldly, guess. This name was supposed to be the Persian form for Xerxes.

The next thing in order was to find the letters for the third name, and that was a much more difficult problem. This was the name which appears in I, line four, last word, thus:



Here were ten signs. Grotefend believed that this word was in the genitive case, and some signs at the end must be cut off as the genitive ending. But how many? That was the question. Perhaps the Avestan language (then called Zend) would help him. To the study of this he now had recourse, and after much doubt decided to cut off the last three as ending, and take what remained as the king's real name. The name which he was seeking, as we have already seen, was Hystaspes, the late Persian form of which Grotefend followed, and thus made out the name:



In this word, as in the other two, later discovery showed that he had made a mistake, but this time only in the first two characters. To Grotefend's own mind the whole case seemed clear and indisputable, for the same characters occurred in all three names, and thus each supported the other. At this time the Persian alphabet was supposed to contain forty-two alphabetic characters, of which Grotefend believed that he had found thirteen. To this he soon added more, by a simple process of combination, using the word for the name of god in these texts, namely, Aurmazda.

He now felt himself able to translate these inscriptions in part, thus:

I. Darius, the mighty king, king of kings.. son of Hystaspes.

II. Xerxes, the mighty king, king of kings... son of Darius, the king.

This was an epoch-making result, and even Grotefend with all his enthusiasm and with all the confidence of genius, did not fully realize it. This much he was anxious to get before the learned world for acceptance, or perhaps for criticism. That should have been easy indeed, but, in fact, it was not easy. The Göttingen Academy of Sciences refused absolutely to believe in his methods or his results, and would not take the risk of disgracing itself by publishing Grotefend's paper, describing his work, in its transactions.<sup>30</sup> He was not an Orientalist at all by training or experience, and the learned men of Göttingen who were orientalists asked whether "any good thing could come out of Nazareth," that is, whether a man who was not an orientalist could possibly offer a contribution of value to oriental learning. The case was a sad one for the patient, plodding decipherer, for it was not easy to see how he could gain any publicity for his work. At this juncture a personal friend, A. H. L. Heeren, who was about to publish a book on the ancient world,<sup>31</sup> offered to give space in the appendix to Grotefend for the purpose of setting forth his theories and discoveries. Grotefend eagerly seized the opportunity, and there appeared his work. It met, on the whole, with a cold reception. Volney denounced it as resting on forms of names which were at least doubtful and might be incorrect, and with him joined many German voices. On the other hand Anquetil-Duperron, now an aged man, waiting "with calmness the dissolution of his mortal frame," and the immortal De Sacy received it with enthusiasm and hailed it as the beginning of the sure reading of these inscriptions.

Those who doubted the whole scheme were later to receive a severe setback, and that from an unexpected source. It will be remembered that while the Persepolis inscriptions were still in the copying stage a beautiful vase had come to Paris which contained some Egyptian hieroglyphics, and also some signs like those found at Persepolis. After the publication of Grotefend's work in Heeren's book the Abbe Saint-Martin, in Paris, devoted much thought and time to its criticism and study. At this salve time Champollion was engaged in the decipherment of the Egyptian hieroglyphics. He suggested to the abbe that they should try to decipher together the marks upon the vase. When this was attempted the abbe found that the name on the vase in cuneiform characters should be transliterated thus:

CH. S H. A. R. S H. A<sup>32</sup>

and this was remarkably confirmed by the finding of the same name, according to Champollion, in the Egyptian signs. This was a small matter in some ways, but it increased the faith of many in the method and results of Grotefend.

Meanwhile Grotefend himself was continuing his efforts to get beyond these few words and decipher a whole inscription. At this stage, however, entirely different traits of mind were needed, and a completely changed mental furnishing. In the preliminary work the type of mind which Grotefend possessed was admirably adapted to the work to be done. The mental training derived from long study of the classics of Greek and Latin was likewise of constant service. He had, however, now reached the point where extensive and definite knowledge of the oriental languages was imperatively necessary. In order to secure words of ancient Persian he must know words in the related oriental languages or in those other languages which, though not related, had been used in or about the same territory, and so might have borrowed words from old Persian. He must also know the oriental spirit, have a feeling for oriental life, be able to understand in advance just about what an oriental was likely to say. None of these possessions were his. His later work was therefore largely abortive. He tried to translate entire inscriptions, and failed almost completely, though he devoted much time for all the rest of his life to this matter, without, however, abandoning his real field of classical literature.

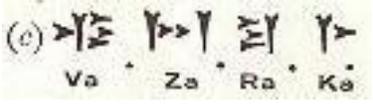
However unsuccessful the later efforts of Grotefend may have been, nothing can ever dim the luster of his fame as a decipherer. It was he who first learned how to read an ancient Persian word. From this, in due course, came the power to read the words of Babylonian and Assyrian. In other words, through the discoveries of Grotefend the world of ancient Persia was reopened, and men learned to read its ancient inscriptions. By them also the much greater worlds of Assyria and Babylonia were likewise rediscovered. Much of what we know of ancient Persia came from them; almost all that we know of Assyria and Babylonia was derived from them. To very few men, in all time, has it happened to make discoveries of such moment.

While he still lived and worked others with better equipment in a knowledge of the oriental languages took up his work. The first of these was a Norwegian by birth, R. Rask. It was his good fortune to discover the plural ending in ancient Persian, which had baffled Grotefend. In the work of decipherment Grotefend never got so far as to determine all the characters in the phrase, king of kings, and this was now achieved by Rask,<sup>33</sup> who correctly apportioned the characters. The same ending appears also in another word after the word "king" Rask also for this suggested a very plausible rendering. In the Sassanian inscriptions the phrase is "king of lands;" why might not this be the same? That question would find its answer at a later day.

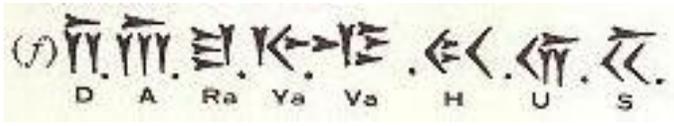
And now appeared a man to grapple with the problem of the inscriptions of Persepolis, who was in learning far better equipped than any who had preceded him. This was the French savant, Eugene Burnouf.<sup>34</sup> He had already gained fame as the man who had given the grammar of Avestan a scientific basis. He knew that language in all its intricacies. To this he added a knowledge of Persian life and religion in the period following that to which these inscriptions belonged. All this learning could be brought to bear upon these inscriptions, and Burnouf used it all

as a master. He found in one of the little inscriptions which Niebuhr had copied at Naksh-i-Rustam a list of names of countries. To this he gave close study, and by means of it accomplished almost at a stroke several distinct achievements. In the first place he found the equivalent for almost every character in the Persian alphabet. In the next he determined finally that old Persian was not the same language as Avestan, but that it was closely related to it, and that therefore there was good hope that Avestan as well as certain Indo-European languages would contribute important light to the study of old Persian.

Before his own discoveries were made in full, and before their publication, Burnouf had called the attention of Lassen to this list of names. Induced by the remarks of Burnouf, Lassen made this same list of names the subject of investigation, and at about the same time as Burnouf published the results of his study, which were almost identical.<sup>35</sup> He had, however, made, in one respect at least, very definite progress over Burnouf. He discovered that, if the system of Grotefend were rigidly followed, and to every letter was given the exact equivalent which Grotefend had assigned, a good many words could not be read at all, while others would be left wholly or almost wholly without vowels. As instances of such words he mentioned CPRD, THTGUS, KTPTUK, FRAISJM. This situation led Lassen to a very important discovery, toward which his knowledge of the Sanskrit alphabet did much to bring him. He came, in one word, to the conclusion that the ancient Persian signs were not entirely alphabetic, but were, partially at least, syllabic, that is, that certain signs were used to represent not merely an alphabetic character like "b," but also a syllable such as "ba," "bi," "bu." He believed that he had successfully demonstrated that the sign for "a" (see second sign in "f," below) was only used at the beginning of a word, or before a consonant, or before another vowel, and that in every other case it was included in the consonant sign. For example, in inscription I the first word of the second line ought to be read thus:



while in inscription II the middle word in line three should be so read:



This discovery was of tremendous importance, and may be said to have completely revolutionized the study of these long puzzling texts. To it two other scholars made important contributions, the one being Beer, and the other Jacquet, a Parisian savant.

This long line of successful decipherment had been carried on with only a small portion of the inscriptions of ancient Persia, that were still in existence. Other and better copies of the inscriptions were even at this time in Europe, but had not been published. In 1811 an English traveler, Claudius James Rich, had visited Persepolis and copied all the texts that were to be found, including those which Niebuhr and his predecessors had copied. These were discovered in the papers of Rich, and in 1839 were published, coming naturally at once into the hands of Lassen, who found in them much new material for the testing of his method and for the extension of the process of decipherment.

Still greater and more valuable material was placed in Lassen's hands through the travels of Westergaard, a Dane, who, in this, imitated worthily his fellow-countryman Niebuhr. Westergaard had again gone over the old ground at Persepolis and had there recopied and carefully collated all the well-known inscriptions.<sup>36</sup> In this he had not done a useless task, for only by oft-repeated copying and comparing could the finally definite and perfect text be attained, without which the decipherment would always be subject to revision. But Westergaard went further than this; he visited at Naksh-i-Rustam the tombs of the Persian kings, and there copied all the tomb inscriptions which were hitherto unknown. On his return this new material was also made accessible to Lassen, who was now fairly the leader in this work of decipherment. Lassen found that the new copies of the old texts were so important that he went over some of the ground afresh and found it useful to reedit some of his work which had before seemed final. The same material called a new worker into the field in the person of Holtzman,<sup>37</sup> of Karlsruhe, in Germany, whose work, however, made no very deep impression on the general movement.

In the work of decipherment thus far the chief positions had been held by Grotefend and Burnouf, but for the maintaining of its international character the time was calling for workers from other lands. As it happened, at this very time an Englishman was at work on the same task, from a different point of view, and with different materials. It was well that this was so, for the conclusions thus far reached would probably have failed of general acceptance but for the support obtained by the publication of similar results achieved by a man of different nationality and diverse training. The history of all forms of decipherment of unknown languages shows that skepticism concerning them is far more prevalent than either its opposite, credulousness, or the happy mean of a not too ready faith.

The man who was thus to rebuke the gainsayer and put the capstone upon the work of the decipherment of the Persian inscriptions was

Major, (afterward Sir) Henry Rawlinson, who was born at Chadlington, Oxford, England, on April 11, 1810. While still a boy Rawlinson went out to India in the service of the East India Company. There he learned Persian and several of the Indian vernaculars. This training hardly seemed likely to produce a man for the work of deciphering an unknown language. It was just such training as had produced men like the earlier travelers who had made the first copies of the inscriptions at Persepolis. It was, however, not the kind of education which Grotefend, Burnouf, and Lassen had received. In 1833 the young Rawlinson went to Persia, there to work with other British officers in the reorganization of the Persian army. To Persia his services were of extraordinary value, and met with hearty recognition. It was in Persia, while engaged in the laborious task of whipping semi-barbarous masses of men into the severe discipline of the soldier's life, that the attention of Rawlinson was attracted by some inscriptions. The first that roused an interest in him were those at Hamadan, which he copied with great care. This was in the year 1835, at a time when a number of European scholars were earnestly trying to decipher the inscriptions from Persepolis. Of all this eager work Rawlinson knew comparatively little. It is impossible now to determine exactly when he first secured knowledge of Grotefend's work, for Norris, the secretary of the Royal Asiatic Society, has left us no record of when he first sent copies of Grotefend's essays to the far-distant decipherer. Whatever was sent in the beginning, it is quite clear that Rawlinson worked largely independently for a considerable time. He had certainly begun his work and adopted his method before he learned of what was going on in Europe.<sup>38</sup>

Rawlinson's method was strikingly like that adopted in the first instance by Grotefend. He had copied two trilingual inscriptions. That he had before him three languages, and not merely three styles of writing, he appears to have understood at once. To this ready appreciation of the presence of three languages Rawlinson's experience of the polyglot character of the East had probably contributed. In 1839 he thus wrote concerning his method of decipherment:

"When I proceeded...to compare and interline the two inscriptions (or, rather, the Persian columns of the two inscriptions, for as the compartments exhibiting the inscription in the Persian language occupied the principal place in the tablets, and were engraved in the least complicated of the three classes of cuneiform writing, they were naturally first submitted to examination) I found that the characters coincided throughout, except in certain particular groups, and it was only reasonable to suppose that the groups which were thus brought out and individualized must represent proper names. I further remarked that there were but three of these distinct groups in the two inscriptions; for the group which occupied the second place in one inscription, and which, from its position, suggested the idea of its representing the name of the father of the king who was there commemorated, corresponded with the group which occupied the first place in the other inscription, and thus not only served determinately to connect the two inscriptions together, but, assuming the groups to represent proper names, appeared also to indicate a genealogical succession. The natural inference was that in these three groups of characters I had obtained the proper names belonging to three consecutive generations of the Persian monarchy; and it so happened that the first three names of Hystaspes, Darius, and Xerxes, which I applied at hazard to the three groups, according to the succession, proved to answer in all respects satisfactorily and were, in fact, the true identifications."<sup>39</sup>

In the autumn of 1836, while at Teheran, Rawlinson first secured an acquaintance with the works of St. Martin and Klaproth, but found in them nothing beyond what he had already attained by his own unaided efforts, and in certain points he felt that he had gone further than they, and with greater probability.

Rawlinson's next work was the copying of the great inscription of Darius on the rocks at Behistun. This was a task of immense difficulty, carried on at the actual risk of his life, from its position high up on the rocks and beneath a blazing sun.<sup>40</sup> In 1835, when he first discovered it, Rawlinson was able to study it only by means of a field glass. At this time he could not copy the whole text, but gained more of it in 1837, when he had become more skilled in the strange character. In that year he forwarded to the Royal Asiatic Society of London his translation of the first two paragraphs of this Persian inscription, containing the name, titles, and genealogy of Darius. It must be remembered that Rawlinson had accomplished this without a knowledge of the related languages, except for what he could extract from the researches of Anquetil-Duperron. In the autumn of 1838, however, he came into possession of the works of Burnouf on the Avestan language, which proved of immense value in his work. He also secured at the same time the copies of the Persepolis inscriptions made by Niebuhr, Le Brun, and Porter, and the names of countries in them were of great assistance to him, as they already had been to Burnouf and Lassen. With the advantage of almost all that European scholars had done, Rawlinson was now able to make rapid progress, and in the winter of 1838-1839 his alphabet of ancient Persian was almost complete. He was, however, unwilling to publish his results until he had ransacked every possible source of information which might have any bearing on the matter. In 1839 he was settled in Baghdad, his work in reality finished and written out for publication, but still hesitating and waiting for more light. Here he obtained books from England for the study of Sanskrit, and a letter from Professor Lassen, which greatly pleased him, though from it he was able to obtain only one character which he had not previously known. Here also he received the copies which Mr. Rich had made at Persepolis, and a transcript of an inscription of Xerxes at Van which had been made by M. Eugène Bore. In this year (1839) he wrote his preliminary memoir, and expected to publish it in the spring of 1840.

Just at this juncture he was suddenly removed from Baghdad and sent to Afghanistan as political agent at Kandahar. In this land, then in a state of war, he spent troublous years until 1843. He was so absorbed in war, in which he won distinction, and in administration as well, that