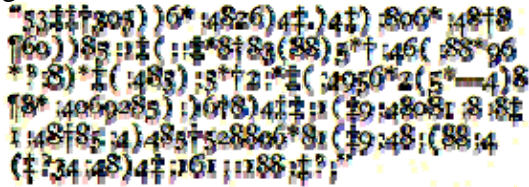


“The Gold-Bug” by Edgar Allen Poe (excerpt)

Here Legrand, having re-heated the parchment, submitted it to my inspection. The following characters were rudely traced, in a red tint, between the death's head and the goat:

A block of red-tinted, illegible characters from the story 'The Gold-Bug'. The characters are a mix of numbers and symbols, appearing as a cipher. The text is: "331117205)6*4826)41.)41) 806*4818
160)85:11(:1*8183(88)5*146(88*96
*18)*1(483):3*12*1(4950*2(5*-4)8
18*4069285)1018)411:(19:48081 8:81
148185:1)4857528806*81(19:481(88:4
(1734:48)41:761:1188:1?,"

"But," said I, returning him the slip, "I am as much in the dark as ever. Were all the jewels of Golconda awaiting me upon my solution of this enigma, I am quite sure that I should be unable to earn them."

"And yet," said Legrand, "the solution is by no means so difficult as you might be led to imagine from the first hasty inspection of the characters. These characters, as any one might readily guess, form a cipher -- that is to say, they convey a meaning; but then from what is known of Kidd, I could not suppose him capable of constructing any of the more abstruse cryptographs. I made up my mind, at once, that this was of a simple species -- such, however, as would appear to the crude intellect of the sailor, absolutely insoluble without the key."

"And you really solved it?"

"Readily; I have solved others of an abstruseness ten thousand times greater. Circumstances, and a certain bias of mind, have led me to take interest in such riddles, and it may well be doubted whether human ingenuity can construct an enigma of the kind

which human ingenuity may not, by proper application, resolve. In fact, having once established connected and legible characters, I scarcely gave a thought to the mere difficulty of developing their import.

"In the present case -- indeed in all cases of secret writing -- the first question regards the *language* of the cipher; for the principles of solution, so far, especially, as the more simple ciphers are concerned, depend upon and are varied by, the genius of the particular idiom. In general, there is no alternative but experiment (directed by probabilities) of every tongue known to him who attempts the solution, until the true one be attained. But, with the cipher now before us all difficulty was removed by the signature. The pun upon the word 'Kidd' is appreciable in no other language than the English. But for this consideration I should have begun my attempts with the Spanish and French, as the tongues in which a secret of this kind would most naturally have been written by a pirate of the Spanish main. As it was, I assumed the cryptograph to be English.

"You observe there are no divisions between the words. Had there been divisions the task would have been comparatively easy. In such cases I should have commenced with a collation and analysis of the shorter words, and, had a word of a single letter occurred, as

is most likely (*a* or *I*, for example), I should have considered the solution as assured. But, there being no division, my first step was to ascertain the predominant letters, as well as the least frequent. Counting all, I constructed a table thus:

Of the character 8 there are 33

;	4	8	26
;	4	8	19
;	4	8	16
;	4	8	13
;	4	8	12
;	4	8	11
;	4	8	8
;	4	8	5
;	4	8	4
;	4	8	2
;	4	8	1

"Now, in English, the letter which most frequently occurs is *e*. Afterward, the succession runs thus: *a o i d h n r s t u y c f g l m w b k p q x z*. *E* predominates so remarkably, that an individual sentence of any length is rarely seen, in which it is not the prevailing character.

"Here, then, we have, in the very beginning, the groundwork for something more than a mere guess. The general use which may be made of the table is obvious -- but, in this particular cipher, we shall only very partially require its aid. As our predominant character is 8, we will commence by assuming it as the *e* of the natural alphabet. To verify the supposition, let us observe if the 8 be seen often in couples -- for *e* is doubled with great frequency in English -- in such words, for example, as 'meet,' 'fleet,' 'speed,' 'seen,' 'been,' 'agree,' etc. In the present instance we see it doubled no less than five times, although the cryptograph is brief.

"Let us assume 8, then, as *e*. Now, of all *words* in the language, 'the' is most usual; let us see, therefore, whether there are not repetitions of any three characters, in the same order of collocation, the last of them being 8. If we discover a repetition of such letters, so arranged, they will most probably represent the word 'the.' Upon inspection, we find no less than seven such arrangements, the characters being ;48. We may, therefore, assume that ; represents *t*, 4 represents *h*, and 8 represents *e* -- the last being now well confirmed. Thus a great step has been taken.

"But, having established a single word, we are enabled to establish a vastly important point; that is to say, several commencements and terminations of other words. Let us refer, for example, to the last instance but one, in which the combination ;48 occurs -- not far from the end of the cipher. We know that the ; immediately ensuing is the commencement of a word, and, of the six characters succeeding this 'the,' we are cognizant of no less than five. Let us set these characters down, thus, by the letters we know them to represent, leaving a space for the unknown --
t eeth.

"Here we are enabled, at once, to discard the 'th,' as forming no portion of the word commencing with the first *t*; since, by experiment of the entire alphabet for a letter adapted to the vacancy, we perceive that no word can be formed of which this *th* can be a part. We are thus narrowed into

t ee,

and, going through the alphabet, if necessary, as before, we arrive at the word 'tree,' as the sole possible reading. We thus gain another letter, *r*, represented by (, with the words 'the tree' in juxtaposition.

"Looking beyond these words, for a short distance, we again see the combination ;48, and employ it by way of *termination* to what immediately precedes. We have thus this arrangement:

the tree ;4(1?34 the.

or substituting the natural letters, where known, it reads thus:

the tree thr?gh the.

"Now, if, in place of the unknown characters, we leave blank spaces, or substitute dots, we read thus:

the tree thr...h the,

when the word '*through*' makes itself evident at once. But this discovery gives us three new letters, *o*, *u*, and *g*, represented by 4, 2,

and 3.

"Looking now, narrowly, through the cipher for combinations of known characters, we find, not very far from the beginning, this arrangement,

83(88, or egee,

which, plainly, is the conclusion of the word 'degree,' and gives us another letter, *d*, represented by 7

"Four letters beyond the word 'degree,' we perceive the combination ;46(;88.

"Translating the known characters, and representing the unknown by dots, as before, we read thus:

th.rtee,

an arrangement immediately suggestive of the word 'thirteen,' and again furnishing us with two new characters, *i* and *n*, represented by 6 and *.

"Referring, now, to the beginning of the cryptograph, we find the combination, 5311.

"Translating as before, we obtain

.good,

which assures us that the first letter is *A*, and that the first two words are 'A good.'

"It is now time that we arrange our key, as far as discovered, in a tabular form, to avoid confusion. It will stand thus:

S	represents	a
Q		d
U		S
B		h
S		i
C		n
O		e
T		r
E		t
N		u

"We have, therefore, no less than eleven of the most important letters represented, and it will be unnecessary to proceed with the details of the solution. I have said enough to convince you that ciphers of this nature are readily soluble, and to give you some insight into the *rationale* of their development. But be assured that the specimen before us appertains to the very simplest species of cryptograph. It now only remains to give you the full translation of the characters upon the parchment, as unriddled. Here it is:

"A good glass in the bishop's hostel in the devil's seat forty-one degrees and thirteen minutes northeast and by north main branch seventh limb east side shoot from the left eye of the death's-head a bee-line from the tree through the shot fifty feet out."

"But," said I, "the enigma seems still in as bad a condition as ever. How is it possible to extort a meaning from all this jargon about 'devil's seats,' 'death's-heads,' and 'bishop's hostels'?"

"I confess," replied Legrand, "that the matter still wears a serious aspect, when regarded with a casual glance. My first endeavor was to divide the sentence into the natural division intended by the cryptographer."

"You mean, to punctuate it?"

"Something of that kind."

"But how was it possible to effect this?"

"I reflected that it had been a *point* with the writer to run his words together without division, so as to increase the difficulty of solution. Now, a not over-acute man, in pursuing such an object, would be nearly certain to overdo the matter. When, in the course of his composition, he arrived at a break in his subject which would naturally require a pause, or a point, he would be exceedingly apt to run his characters, at this place, more than usually close together. If you will observe the MS., in the present instance, you will easily detect five such cases of unusual crowding. Acting upon this hint, I made the division thus:

"A good glass in the bishop's hostel in the devil's seat -- forty-one degrees and thirteen minutes -- northeast and by north -- main branch seventh limb east side -- shoot from the left eye of the death's-head -- a bee-line from the tree through the shot fifty feet out."

"Even this division," said I, "leaves me still in the dark."

"It left me also in the dark," replied Legrand, "for a few days; during which I made diligent inquiry, in the neighborhood of Sullivan's Island, for any building which went by the name of the 'Bishop's Hotel'; for, of course, I dropped the obsolete word 'hostel.' Gaining no information on the subject, I was on the point of extending my sphere of search, and proceeding in a more systematic manner, when, one morning, it entered into my head, quite suddenly, that this 'Bishop's Hostel' might have some reference to an old family, of the name of Bessop, which, time out of mind, had held possession of an ancient manor-house, about four miles to the northward of the island. I accordingly went over to the plantation, and re-instituted my inquiries among the older negroes of the place. At length one of the most aged of the women said that she had heard of such a place as *Bessop's Castle*, and thought that she could guide me to it, but that it was not a castle, nor a tavern, but a high rock.

"I offered to pay her well for her trouble, and, after some demur, she consented to accompany me to the spot. We found it without much difficulty, when, dismissing her, I proceeded to examine the place. The 'castle' consisted of an irregular assemblage of cliffs and rocks -- one of the latter being quite remarkable for its height as well as for its insulated and artificial appearance. I clambered to its apex, and then felt much at a loss as to what should be next done.

"While I was busied in reflection, my eyes fell upon a narrow ledge in the eastern face of the rock, perhaps a yard below the summit upon which I stood. This ledge projected about eighteen inches, and was not more than a foot wide, while a niche in the cliff just above it gave it a rude resemblance to one of the hollow-backed chairs used by our ancestors. I made no doubt that here was the 'devil's-seat' alluded to in the MS., and now I seemed to grasp the full secret of the riddle.

"The 'good glass,' I knew, could have reference to nothing but a telescope; for the word 'glass' is rarely employed in any other sense by seamen. Now here, I at once saw, was a telescope to be used, and a definite point of view, *admitting no variation*, from which to use it. Nor did I hesitate to believe that the phrases, 'forty-one degrees and thirteen minutes,' and 'northeast and by north,' were intended as directions for the levelling of the glass. Greatly excited by these discoveries, I hurried home, procured a telescope, and returned to the rock.

"I let myself down to the ledge, and found that it was impossible to retain a seat upon it except in one particular position. This fact confirmed my preconceived idea. I proceeded to use the glass. Of course, the 'forty-one degrees and thirteen minutes' could allude to nothing but elevation above the visible horizon, since the horizontal direction was clearly indicated by the words, 'northeast and by north.' This latter direction I at once established by means of a pocket-compass; then, pointing the glass as nearly at an angle of forty-one degrees of elevation as I could do it by guess, I moved it cautiously up or down, until my

attention was arrested by a circular rift or opening in the foliage of a large tree that overtopped its fellows in the distance. In the centre of this rift I perceived a white spot, but could not, at first, distinguish what it was. Adjusting the focus of the telescope, I again looked, and now made it out to be a human skull.

"Upon this discovery I was so sanguine as to consider the enigma solved; for the phrase 'main branch, seventh limb, east side,' could refer only to the position of the skull upon the tree, while 'shoot from the left eye of the death's-head' admitted, also, of but one interpretation, in regard to a search for a buried treasure. I perceived that the design was to drop a bullet from the left eye of the skull, and that a bee-line, or, in other words, a straight line, drawn from the nearest point of the trunk through 'the shot' (or the spot where the bullet fell), and thence extended to a distance of fifty feet, would indicate a definite point -- and beneath this point I thought it at least *possible* that a deposit of value lay concealed."

"All this," I said, "is exceedingly clear, and, although ingenious, still simple and explicit. When you left the 'Bishop's Hotel,' what then?"

"Why, having carefully taken the bearings of the tree, I turned homeward. The instant that I left 'the devil's-seat,' however, the circular rift vanished; nor could I get a glimpse of it afterward, turn as I would. What seems to me the chief ingenuity in this whole business, is the fact (for repeated experiment has convinced me it *is* a fact) that the circular opening in question is visible from no other attainable point of view than that afforded by the narrow ledge upon the face of the rock.

"In this expedition to the 'Bishop's Hotel' I had been attended by Jupiter, who had, no doubt, observed, for some weeks past, the abstraction of my demeanor, and took especial care not to leave me alone. But, on the next day, getting up very early, I contrived to give him the slip, and went into the hills in search of the tree. After much toil I found it. When I came home at night my valet proposed to give me a flogging. With the rest of the adventure I believe you are as well acquainted as myself."

"I suppose," said I, "you missed the spot, in the first attempt at digging, through Jupiter's stupidity in letting the bug fall through the right instead of through the left eye of the skull."

"Precisely. This mistake made a difference of about two inches and a half in the 'shot' -- that is to say, in the position of the peg nearest the tree; and had the treasure been *beneath* the 'shot,' the error would have been of little moment; but 'the shot,' together with the nearest point of the tree, were merely two points for the establishment of a line of direction; of course the error, however trivial in the beginning, increased as we proceeded with the line, and by the time we had gone fifty feet threw us quite off the scent. But for my deep-seated impressions that treasure was here somewhere actually buried, we might have had all our labor in vain."

"I presume the fancy of *the skull*, of letting fall a bullet through the skull's eye -- was suggested to Kidd by the piratical flag. No doubt he felt a kind of poetical consistency in recovering his money through this ominous insignium."

"Perhaps so; still I cannot help thinking that common-sense had quite as much to do with the matter as poetical consistency. To be visible from the devil's-seat, it was necessary that the object, if small, should be white; and there is nothing like your human skull for retaining and even increasing its whiteness under exposure to all vicissitudes of weather."

"But your grandiloquence, and your conduct in swinging the beetle -- how excessively odd! I was sure you were mad. And why did you insist upon letting fall the bug, instead of a bullet, from the skull?"

"Why, to be frank, I felt somewhat annoyed by your evident suspicions touching my sanity, and so resolved to punish you quietly, in my own way, by a little bit of sober mystification. For this reason I swung the beetle, and for this reason I let it fall from the tree. An observation of yours about its great weight suggested the latter idea."