

Colonel Glover,
continued,
10th May 1878.

14. Have you any information as to where the breakages really have taken place during that period? —I have not, I am sorry to say; but I mean that the breakages are not of necessity upon the lines of the company—they may occur in your own colonies.

15. Upon the land line?—And even on your own land line.

16. I mean upon the overland line?—Yes.

17. We always hear when that is the case?—Yes; but when I have been here lately I always hear the cable immediately referred to.

18. *By the Chairman (to Mr. Todd).*—How many of these breakages would be upon the overland line?

Mr. Todd.—Between Singapore and Port Darwin?

19. *The Chairman.*—Yes?

Mr. Todd.—The first interruption was between the 22nd June and the 20th October; that was between Port Darwin and Banjoewangie.

The Witness.—That was, I think, before the overland line was in operation.

20. *The Chairman.*—Yes?—So that you could not have had any communication whether the cable was in operation or not.

21. Yes, but the first interruption?

Mr. Todd.—After the land line was completed, was between March 31st and April the 2nd. That was between Batavia and Singapore—that is only a few days. The second interruption: between Batavia and Singapore there were several interruptions in 1874—three interruptions—one from May 20th to May 31st; August 13th to August 23rd virtually.

22. *By the Chairman.*—Do those interruptions all come within that duplication?

Mr. Todd.—Yes, between Batavia and Singapore. The next interruption: September the 12th to September 16th, between Batavia and Singapore; November the 5th to the 8th, upon the same section—that is four interruptions.

23. *Mr. Mein.*—You have omitted one, according to the printed return—an interruption from December 10th to the 24th.

Mr. Todd.—Yes, I did; I beg your pardon.

24. *The Chairman.*—There are four in 1874, and two in 1875—that is six.

Mr. Todd.—There were four in 1874; and in 1875 there were only two; in 1876 there were two interruptions; 1877, there were three interruptions; and in 1878 one interruption, on this particular line

25. *By Mr. Mein.*—Would not you call the land line an interruption, within the part proposed to be duplicated?

The Chairman.—Not as it relates to Colonel Glover.

Mr. Mein.—It was an interruption upon the Java land line.

Mr. Todd.—I was not speaking of that.

The Chairman.—The duplication would not affect that.

26. *Mr. Mein.*—If we throw Java out of consideration, we do not have two lines, we have only one?

The Witness.—I do not understand you; one line goes to one end of Java, and the other to the other, so that in the duplication you would not have to consider Java at all.

27. *By the Chairman.*—Apart from what has taken place in the colonies, and from what we are considering now, are you in a position to tell us the opinion of the directors as to the necessity for a duplication, or whether there is any other mode by which the present cable could be made more secure; is there any prospect of this being in better working order for the future?—I should like to make a remark. The principal cause of the interruption is an insect which we have found, and that has not been discovered in cables in any other part of the world. It bores into the cable; it does not interrupt it, a telegraphist will understand my meaning: it does not break the cable in two, but it taps it; it is like boring a few holes into a water-pipe—one hole allows the water to run, but if you bore a number of holes, there is, after a time, such a leakage that you can scarcely get any water at all. This insect bores into the line, and makes the signal, after a time, indistinct; then we send out the ship. We can pick up the cable perfectly readily, the only inconvenience is the delay of a few days. I think the finding of this insect here is due to the warm seas. If we duplicate the cable, we shall put a covering of metal over the gutta-percha that will prevent the insect from boring. All these things are experimental and tentative. Had we known of this insect in the first instance, we should have done this, and you would not, I believe, have had these interruptions—which lie principally between Batavia and Singapore.

28. *By Mr. Todd.*—I believe, Colonel Glover, that in any new cable laid down in those seas it is the intention to sheathe the gutta-percha core with metal?—Yes.

29. Am I right when I say it is to be sheathed with two layers, a right band and a left band spiral sheathing?—I cannot tell you that exactly, because when I left England experiments were being made, and the form of the cable has been determined since I left.

30. It is to be closed up against these boring insects?—It is intended to be so; but I cannot say that it will be so, for the cable now is made out of iron wires twisted all round the cable, and how the insect can get in where you cannot get a pin in is a thing we cannot explain to you. But it does get in, and now we are going to put a tape as it were of metal on the gutta-percha on the inside, and then the wire outside as usual, which we believe will entirely prevent the animal getting in.

31. I see between Batavia and Singapore since 1871 the longest interruption was fourteen days; the others varied from three to eleven days; is that because the cable lies in shallow seas?—The shortness of the interruptions, and the facility of repairs is entirely due to the shallow seas, and that is why we advocate this line, that we have no doubt of being able to make repairs; but the first interruption that Mr. Todd mentioned occurred before the land line was completed; that interruption lasted some months; the ship went out and lost the whole of her gear, and new gear and a certain number of electricians and scientific men had to be sent out from England to make the repairs, because it was in deep water. Again, an interruption upon the Madras and Penang section, from which you suffered for six months, was on account of deep water, with the monsoon blowing. At present there are two out of the four or five of the Atlantic cables lying unrepaired and broken in deep water; they cannot get at them.