

# *Great Britain: The 1858–1879 1d Rose-Red Plate 77*

by Richard Debney

I have read the interesting 29-page article on this stamp by Abed Habib Najjar that appeared in the September–October and November–December 2008 numbers of *The Collectors Club Philatelist*. I have what I consider to be a relevant opinion about the cover in question.

Firstly, I have to declare a personal connection. I wrote the prevailing opinion quoted by Mr. Najjar as Expert Opinion “B” and was responsible for the information conveyed to him in the subsequent correspondence. I was aware of the information contained in Expert Opinion “A” prior to writing mine. At least four of my former colleagues, all fine philatelists, agreed with my findings. At the institution involved, there is a policy of not divulging the names of individual experts, as enthusiastic submitters, campaigning on behalf of their material, have occasionally contacted experts inappropriately, sometimes even based on a mere rumor of a negative opinion. It is completely my choice to disclose my involvement. I am completely happy with the opinion and am willing to put at stake my thirty-two-year professional reputation upon it.

Additionally, in the section labeled “Expert Opinions,” Mr. Najjar states that the two opinions differ greatly. They do not. Both opinions call the item faked, the only slight difference in opinion is how the fakery was achieved. To be absolutely fair to Mr. Najjar I do very much continue to support what he calls the “painted-in” option rather than the “cut-and-paste” option of Expert Opinion “A.”

I will deal with Mr. Najjar’s article as a single entity, as some issues appear in both parts, though I will try to deal with issues chronologically quoting the sections involved.

Firstly, I have no opinion on the philatelic history of Plate 77. I grew up in England and learnt about this great rarity, fully accepting its existence, just like other collectors. I have no comments to make on the writings and correspondence published by some of the “ancients” and “greats” of philately. The names of W.R.D. Wiggins, Rowland Hill, Justice F.A. Philbrick and W.A.S. Westoby, Ormond Hill, Hastings E. Wright and A.B. Creeke, Jr., and, of course, E.D. Bacon appear throughout the article. I am not a Great Britain philatelist and did not know that there were only nine accepted copies of Plate 77 currently in existence. Mr. Najjar’s article does an excellent job of telling why Plate 77 stamps might not exist at all. The explanation of the postal history aspects of the part cover is without fault.

In my experience, the overwhelming expectation for any stamp submitted as a Plate 77 is that of a Plate 177 with the “1” either not visible, covered over by a postmark or painted/colored over. This is clearly not the case with this part cover, and Mr. Najjar correctly points out that the check letters, together with a constant flaw, identifies the stamps SK and SL to Plate 73. My own former institution did not identify the stamps to Plate 73 since we did not have the reference material to specifically come to that conclusion. The most important feature of our findings was pointed out to Mr. Najjar, in correspondence, and was the presence of five small localized areas of about 1.5 mm. in diameter, covering the second “7” of each “77” with a yellowish rose-red color as opposed to the lake red color of the stamp. The abraded/scuffed area on stamp SL in the right tablet did not appear to have it. These we agreed with Mr. Najjar

were due to the skilful application of pigment/paint/color/dye or similar in order to complete the faking process. This yellowish rose-red color is mentioned only once in Mr. Najjar's article, in the "Expert Opinions" section, and he later refers to it as the "painted-in" option. None of the photographs of the part cover or photographs of details of the stamps (especially Figure 11 on page 283) in Mr. Najjar's article show the color differences observed. This may well be due to the level of illumination of the photographs. They are, the distinctive yellowish rose-red areas, visible to the naked eye and easily visible using the simplest process of inspection with a 10 power magnifying glass. No one at the institution whom I asked to examine the areas in question failed to observe the distinct color differences.

As far as the expertizing of the part cover is concerned, this is the "smoking gun." The plating of the stamps to Plate 73 in Expert Opinion "A," which is also confirmed by Mr. Najjar, is the "icing on the cake." The French have an expression that roughly describes both: *Si ma tante en avait...*

## **A Comparison of the Plate 77 Roller Die Impression and the Stamps**

Mr. Najjar has been fortunate to be able to compare three of the nine accepted copies of Plate 77 with a proof from the plate 77 transfer roller (available as an uninked impression) in The British Library Philatelic Collections. Mr. Najjar illustrates the tiniest of differences between the three stamps themselves and also between the stamps and the transfer roller proof in Figure 5 on page 274 and in Figure 7 on page 276.

I do not believe this to be, in any way, a fair comparison, simply because during the rocking-in process in the printing plate manufacture the transfer roller subjects the plate to enormous pressures, repeatedly, sometimes up to 240 times. The differences between the stamps, as shown in Figure 7 on page 276, are truly tiny and of no consequence whatsoever, in my opinion.

## **The Challenge of Changing a "3" to a "7"**

If the right-hand diamond containing the second "7" of each "77" is smoothly abraded down to clean uninked paper and the small 1.5 mm diameter area surrounding filled in by the application of "pigment/paint/color/dye or similar" leaving a white "7" visible, the process could be accomplished. The cancellations shown near the second "7s" in Figure 11 on page 283 are truly amorphous and could easily have been created. Moreover, though this is highly speculative, the abraded/scuffed area on stamp SL in the right-hand tablet could be the result of a failed attempt at abrasion by the faker. That the part cover shows the correct rate is immaterial to its authenticity or lack thereof as a Plate 77. Using the method described above a "2" is just as easy to manipulate as a "3," the faker simply used what was available to him. When the fakery was performed and the circumstances of the item's discovery, that it was in an old-time collection on the continent, are of no relevance to its authenticity.

## **Forensic Testing**

Mr. Najjar states that the cover was sent to four forensic organizations for study. Additionally, the cover was the subject of examination by Dr. Gene Hall of Rutgers University, to confirm the findings from previous examinations. In the article Mr. Najjar concentrates on the findings produced by two of the groups, namely Reading Scientific Services Ltd. (RSSS) and Dr. Hall's work at Rutgers.

I am not a scientist, but I have had some science education in England at the University level prior to coming to America in 1979. I therefore realize the need to tread gently in this area. As far as the chemistry is concerned, I think it is fair to say that, in summary, Dr. Hall's work replicates and confirms the work done by RSSL. Dr. Hall's work is more extensive in that the additional use of Raman spectroscopy identifies compounds whereas EDXRF spectroscopy identifies elements only. Additionally Dr Hall's work showed that zinc was present in the paper of the envelope which seems to negate the views expressed by Mr. Najjar in "The Importance of Zinc" section in the first part of the article (pages 282-283). Mr. Najjar seems to attach more importance to the work done by Dr. Hall than that of RSSL, at least in terms of page space devoted to it in the article. I will, therefore, pay more attention to Dr. Hall's work in the second part of the article (pages 337-342) under the section headings.

## **Color Analysis**

Mr. Najjar states that the primary difference between Sample A (basic stamp color) and Sample B (second "7") is the presence of lead (Pb), barium (Ba) and chromium (Cr) in Sample B. This is shown in the spectral EDXRF graph of one of the stamps on the cover. (Figure 5 on page 339)

However the graph shown lacks any labeling on the *y* axis and has no units on the *x* axis. My reading of the graph as shown agrees with what Mr. Najjar claims, but it also shows, in my opinion, there to be less iron (Fe) and much less mercury (Hg) present in Sample B. Additionally the unlabeled peak at 11.75 on the *x* axis also shows less of whatever element that peak might represent in Sample B. Also, but of much lesser importance, the tops of five traces have been cut in Figure 5 leaving an unlabeled peak between zinc (Zn) and mercury (Hg).

From the graph as shown I do not think that the inks in Samples A and B can be claimed to be of an "identical nature," and consequently the opinion that the ink has been "painted in" cannot be ruled out.

Comparisons of Samples A and C (plate 73 stamp) is surely not really that important as they would be expected to be similar or even practically identical, it is the difference between Samples A and B that are important.

## **Surface Analysis**

In Figure 6 on page 340, all of the black and white photographs are mislabeled. Remember, the stamps are identified by the check letters RL, SK and SL, and not the reverse. [Editor's note: the mistake was mine, made when I was doing the layout. My apologies for the errors.] Additionally the third photograph might have been labeled (even if incorrectly) "LR left diamond" rather than "KS left diamond." The use of the words left and right diamond is also a little confusing in one aspect since the suspect "7s" are always in the right diamond. Perhaps the terms used should have been left and right tablets or even sides. More importantly, the comparisons are between the amended areas of the second "7s," whether replaced or painted in, and the scuffed "7." There are no scanning electron microscope photographs of the areas not in dispute as a control.

In the work done by RSSL, Mr. Najjar states that their scanning electron microscope images of the scuffed area on stamp SL shows the fibers as being long and more "exposed," as might be expected, (page 281). The sixth photograph in Figure 6 would appear to contradict that observation.

## Raman Examination

This is where the situation becomes more interesting. Dr. Hall confirmed the presence of the compound lead chromate ( $\text{PbCrO}_4$ ) in the disputed second “7” areas. Lead chromate, commonly referred to as chrome yellow, is a vivid yellow color and is used as a pigment in paints. In my opinion this clearly explains the yellowish rose-red color, which was information conveyed to Mr. Najjar in correspondence from Expert Opinion “B.” Mr. Najjar generously concedes that “The presence of the trace elements suggest that something in the area of the second ‘7’ could have affected the final printed stamp.” (pages 341–342)

## Doubts: Possibilities: A Solution?

I have no comments to make on any of these sections.

## Future Studies Needed

The nine accepted copies of Plate 77 should have their check letters compared to the corresponding stamps from Plates 71, 72, 73, 74, 76, 78 and 79.

## Conclusion

In my opinion, the forensic testing does not disprove the findings of either Expert Opinion “A” or “B.” Further research may prove the item to be a fake of something that was only thought to exist, rather than a fake of something that actually exists.

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# *Response to Comments about the Plate 77 article*

by Abed Habib Najjar

Thank you for the opportunity to examine Mr. Debney’s response to my article. I am happy to provide clarification for the key points he has raised.

First, Mr. Debney says that there is no difference between the opinions of the two expert groups that have examined the cover. If by that he means that both say it was faked, then he is, of course, correct. On the other hand, the difference between the faking methodologies of one saying that it was painted-in and the other saying that it was a cut-and-paste operation are poles apart. Each involves physical manipulation of a completely different sort, and each can be detected by careful examination by technology more advanced than a 10x magnifier.

An item that had been painted-in, for example, should show a substantial and measurable difference between the elements present in the ink when subjected to EDXRF and Raman investigation, even if they were to appear the same to the naked eye. Further, there is an obvious problem with his later remarks that the second 7s could have been created if the diamonds had been “smoothly abraded down to clean uninked paper and the small 1.5 mm diameter area surrounding filled in by the application of ‘pigment/paint/color/dye or similar’ leaving a white ‘7’ visible.” The abrading would have to be down to a deep level of the structure of the paper on an engraved stamp (the paper of which is thin and fragile), and the fibers would certainly show such

disturbance in the Scanning Electron Microscope (SEM) photos. Those photos show no evidence of such scraping. Further, the colorant, whatever it may be supposed to have been, would almost without question be measurably and significantly different from that of the rest of the stamp, and would almost certainly be seen as a layer on the SEM photos as well.

The cut-and-paste option, which Mr. Debney rejects, would also be obvious in the SEM photos, but the ink would likely respond to the same levels as the rest of the stamp, thus making the SEM examination more critical. However, such cutting would be very obvious under such circumstances and again does not show at all in the photos.

### **Visual sighting of the painting:**

Mr. Debney cites the article in saying that “None of the photographs of the part cover or photographs of details of the stamps (especially Figure 11 on page 283) in Mr. Najjar’s article show the color differences observed. This may well be due to the level of illumination of the photographs.” It could also be evidence that the difference in color he felt he observed was an artifact of the way in which he was observing the item. If a “distinctive yellowish rose-red” were present, it is much more likely to appear when an image is made rather than viewed through the somewhat distorting elements of a “10 power magnifying glass.” It is curious that although he cites four other experts in his former office as having seen the yellowish shade, it has not been seen by any of the other specialists and experts who have viewed the stamps in other examinations.

### **Regarding the difference between the Transfer Roller and the accepted Plate 77s**

Although minute differences might be expected in 240 different positions on a plate, the differences are far from “tiny and of no consequence whatsoever,” as claimed by Mr. Debney. Differences in depth of the impression are possible, although relatively unlikely, but differences in the angles and length of the strokes on the 7s are not what one would expect in a transfer from the same die. In particular, the slight dash that is seen under the horizontal stroke of the second “7” of the right-hand “77” should appear on any stamp printed from a plate using that die. It was introduced into the design by the nature of the overall pattern of the background having the dashes occur regularly as a part of the design. Its absence from any of the stamps bearing plate number 77 further suggests that the plate was never used.

### **Changing a “3” to a “7”**

Mentioned above, it is virtually impossible to remove color from the engraved area of a stamp by “smoothly” abrading it, without disturbing the fibers. The added colorant would be detected as an overlying layer if viewed in an SEM image, as well as being quite different from the elemental makeup of the ink of the rest of the stamp. The means described in the original article can remain a valid suggestion as to how the change from “3” to “7” took place, as certainly had to be the case.

### **The Importance of Zinc**

Here Mr. Debney is correct. The first half of the article was written based on the findings of the RSSL, which showed zinc, and before Prof. Hall’s additional findings, using

equipment that had not been considered necessary before. That analysis was corrected in the second half of the article, in the November–December issue, on page 338.

## **Color analysis**

The graph of comparison of Sample A combined with Sample B in the EDXRF analysis (p. 339), concentrates on the lower portion that shows the very minor differences between the two pigments. The “fingerprint” of lead chromate by itself, as an added color in the presumed scraped area, would be quite different. The conclusion that the inks are of an “identical nature” is left to the expert, Prof. Hall, with, perhaps, expanded remarks.

## **Surface analysis**

Again, Mr. Debney has caught a mistake, but one made by the *CCP* editor in assembling the page showing the SEM photos. [My apologies. RPO] The check letters used to designate the stamps are indeed reversed, and that should have been caught but it wasn't. The nomenclature used to describe the location of the second diamonds on either side of the stamp could have been better phrased, but most readers would make the correct assumption. A corrected page will be posted on the Collectors Club website, at [www.collectorsclub.org](http://www.collectorsclub.org). The important part to note is that the long fibers and basic surface of the diamonds of the second halves of the 77s are undisturbed, except for the scuffed portion of the bottom-right stamp (SL).

## **Raman examination**

Again, the presence of lead chromate is a very small part of the overall pigment, and not the sole color, in the right diamond. If a scraping and recoloring with lead chromate had been done, ignoring all the other reasons why it is not likely, the Raman trace would have shown a completely different pattern, such as the blue trace in Figure 8. The trace elements could easily have been due to a reaction with the metal plugs that may have been used to convert the “3s” into “7s” on the plate.

### **Professor Gene Hall Adds:**

“The other bands (“bumps”) in the Raman spectra are from HgS. There was only  $\text{PbCrO}_4$  in only particles in the ink and the concentration was very low. This does not jive with the “painted in” theory. From the XRF and Raman, if the color was painted in, then there would be a distribution and higher concentration of Ba, Cr, and Pb in the diamond area. This was not the case.”

## **Future Studies Needed**

A comparison of the accepted Plate 77 stamps for a commonality of check letters with the early plates is indeed called for, and such inspection may be forthcoming.

## **Conclusion**

The argument presented by Mr. Debney for scraping and painting-in does not hold up given the strength of scientific analysis as compared with human-eye observation. The same holds true for cut-and-paste. Neither reason for calling the item a fake can be substantiated when viewed using advanced technology. The question of the origin of the Plate 77 stamps, however, remains open to an answer.