



Paul Leonard BSc. (Hons)., CSci., FRPSL

*Forensic Philately & Expertising at the
Royal Philatelic Society*

**A talk to the Southampton & District
Philatelic Society, 3rd October 2023**

Compiled by Paul Leonard with thanks to Chris Harman, Ian Harvey, John Shaw, Simon Richards, Alan Huggins & Peter Lister.



Outline of the Presentation:

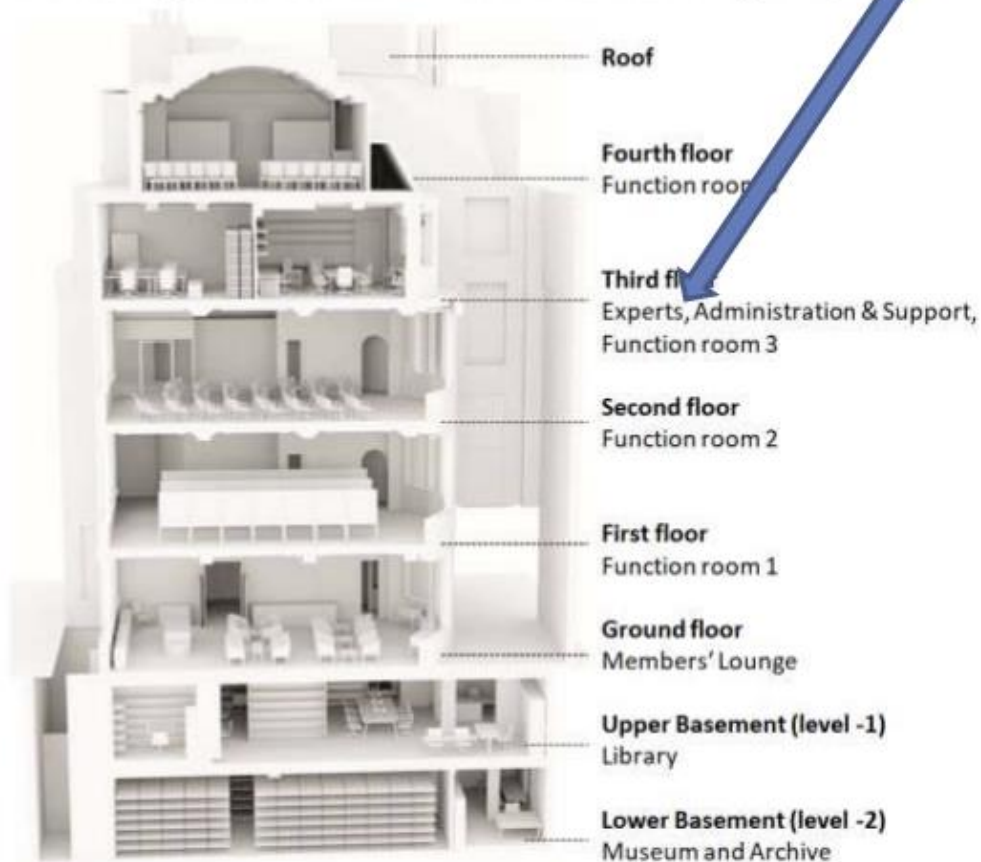
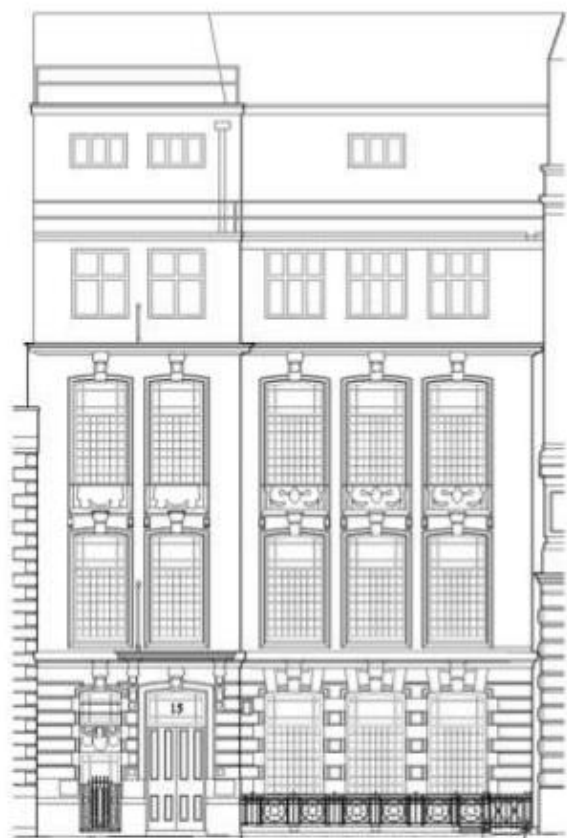
- *Introduction to the work of the Expert Committee*
- *How members of the Expert Committee get involved*
- *Forensic Philately*
- *Highlights and Challenges*
- *Submitting your Material*

Introduction to the work of the Expert Committee



15 Abchurch Lane ~ The Home of the Royal Philatelic Society

The building has 7 floors, including 2 basement levels below ground



Introduction to the work of the Expert Committee



Visit of Her Majesty The Queen, November 2019

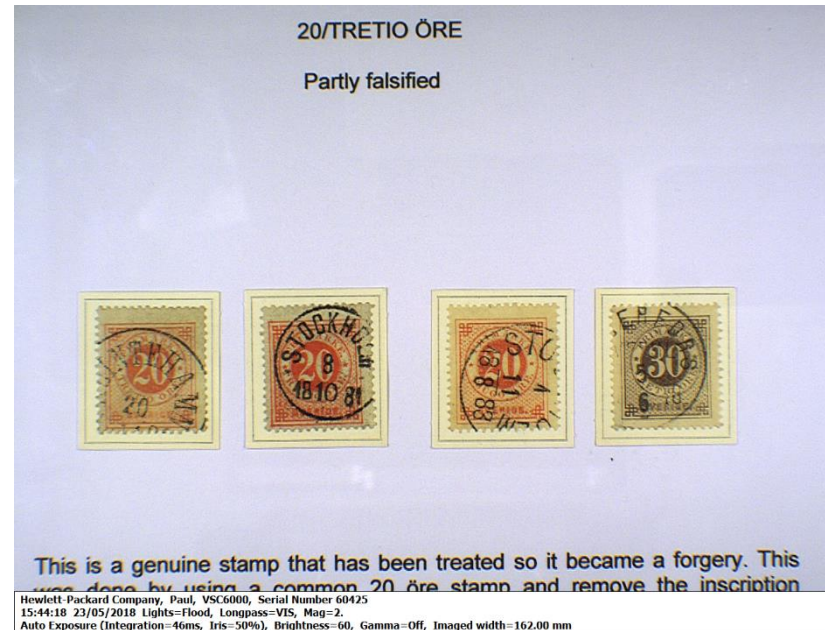
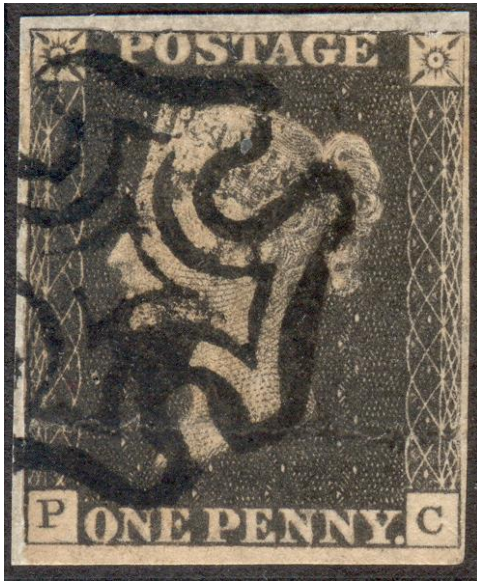


*Her Majesty meeting the members of the Expert Committee:
(left to right) Tomas Bjäringer RDP Hon FRPSL, Charlie Mead FRPSL, Maggie Thompson FRPSL,
Lucy Caulfield, Peter Lister FRPSL and Chris Harman RDP Hon FRPSL*

Introduction to the work of the Expert Committee



Stamps may be worth a small amount of money while some may be worth a lot of money. How do you find out?



Items may be manipulated to enhance their value. The Expert Committee seeks to provide an opinion based on knowledge, reference material and scientific analysis.

How members of the Expert Committee get involved



Members of the 2023 Expert Committee

Christopher Harman RDP, Hon. FRPSL, Chairman

Tomas Bjäringer RDP, Hon. FRPSL

*Dr Tim Harrison FRPSL

Stephen Holder RDP, FRPSL

Dr. Alan Huggins MBE, RDP, Hon. FRPSL

Ian Harvey FRPSL

John Shaw MBE, FRPSL

Peter Lister FRPSL

*Simon Richards FRPSL

Brian Trotter RDP, Hon. FRPSL

Brief History and Operations of the Expert Committee



- Founded in April 1894 following an instruction to Council “to appoint an Expert Committee who shall adjudicate upon any stamp or stamps submitted to them for their opinion”.
- Original members were M. P. Castle, E. D. Bacon & Major E. B. Evans

The First Experts Committee of The Philatelic Society London

The first Committee of Experts consisted of these three men:



Edward Denny Bacon (1860-1938)

E. D. Bacon.



Marcellus Purnell Castle (1849-1917)

M. P. Castle



Edward Benjamin Evans (1846-1922)

Edw. B. Evans.

Brief History and Operations of the Expert Committee



- It is surprising to many that, 120 years on, the Committee has had a total of 43 members.
- The Committee seek assistance from many consultants who have specialist knowledge of (often esoteric) subjects.
- The work of the Committee is labour intensive and there are a number of volunteer helpers who prepare paperwork, check photographs and write certificates.
- The day to day work of the Committee is managed by Ms. Lucy Caulfield, our Expertisation Manager.

Read more :Sundberg M (2019) The Centre of the Philatelic World: Daily Life at The Royal Philatelic Society London, 41 Devonshire Place : Stockholmia 2019 Exhibition Catalogue 165 – 204. With pages 185 – 194 ‘Seeking the Truth’ ...



Operations of the Expert Committee



Material that needs to be assessed may be compared with reference material



Reviewing what is known about the submitted item from Society collections

Reference books

Operations of the Expert Committee



An essential
tool x 10
magnifying
glass



A chemical
+ tray to
help
determine a
watermark

Operations of the Expert Committee: The Process



- Receipt of a stamp on or off an envelope is called a 'patient' and the patient submission details & the submitter are recorded.
- Patient is mounted in folder for examination.
- Photographic records (about 230,000) are checked to see if it has been seen before and used for comparison.
- Initial examination and written comments are made – cross-checked by two or three others ahead of a formal Meeting of the Committee.
- The Committee usually sits every six weeks and each member has an opportunity to examine the patient and pass comments.
- After each meeting a number of items will be taken for comparison with collections of known provenance e.g. The British Library or Royal Philatelic Collection . Items may be sent (or scanned) to worldwide consultants for comment **n.b.** All expertising is a matter of opinion and experts (and expert committees) do not always agree.

A typical Expert Committee meeting



Operations of the Expert Committee :

The main challenges to the expertiser



- Cleaned used stamps masquerading as unused
- Coloured and distinctive postmarks (for example the Great Britain Maltese Cross)
- Stamps with margins or corners added
- Stamps on cover that did not originate on the cover
- Creation of rare separations – roulette / pin perforations

Expert Committee ~ Contributions to the Archive

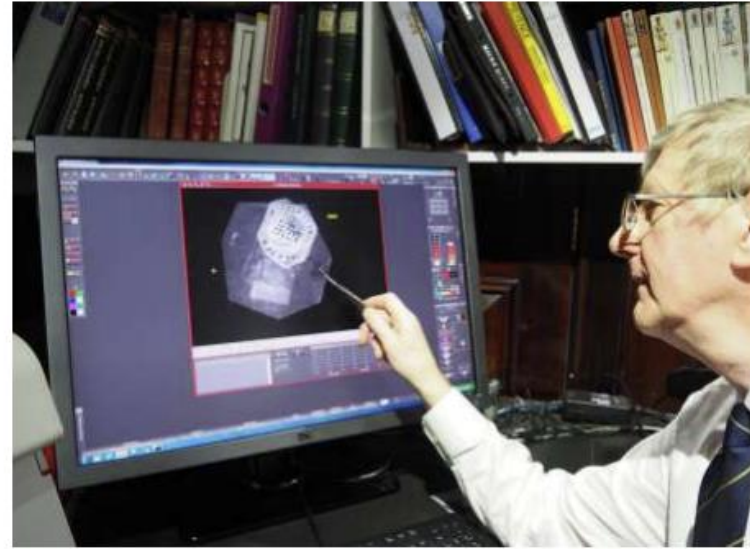


Preparing
two
photographs



One
photograph
for the
certificate
and a
second for
our records.

Other ~ Contributions



26 November 2019

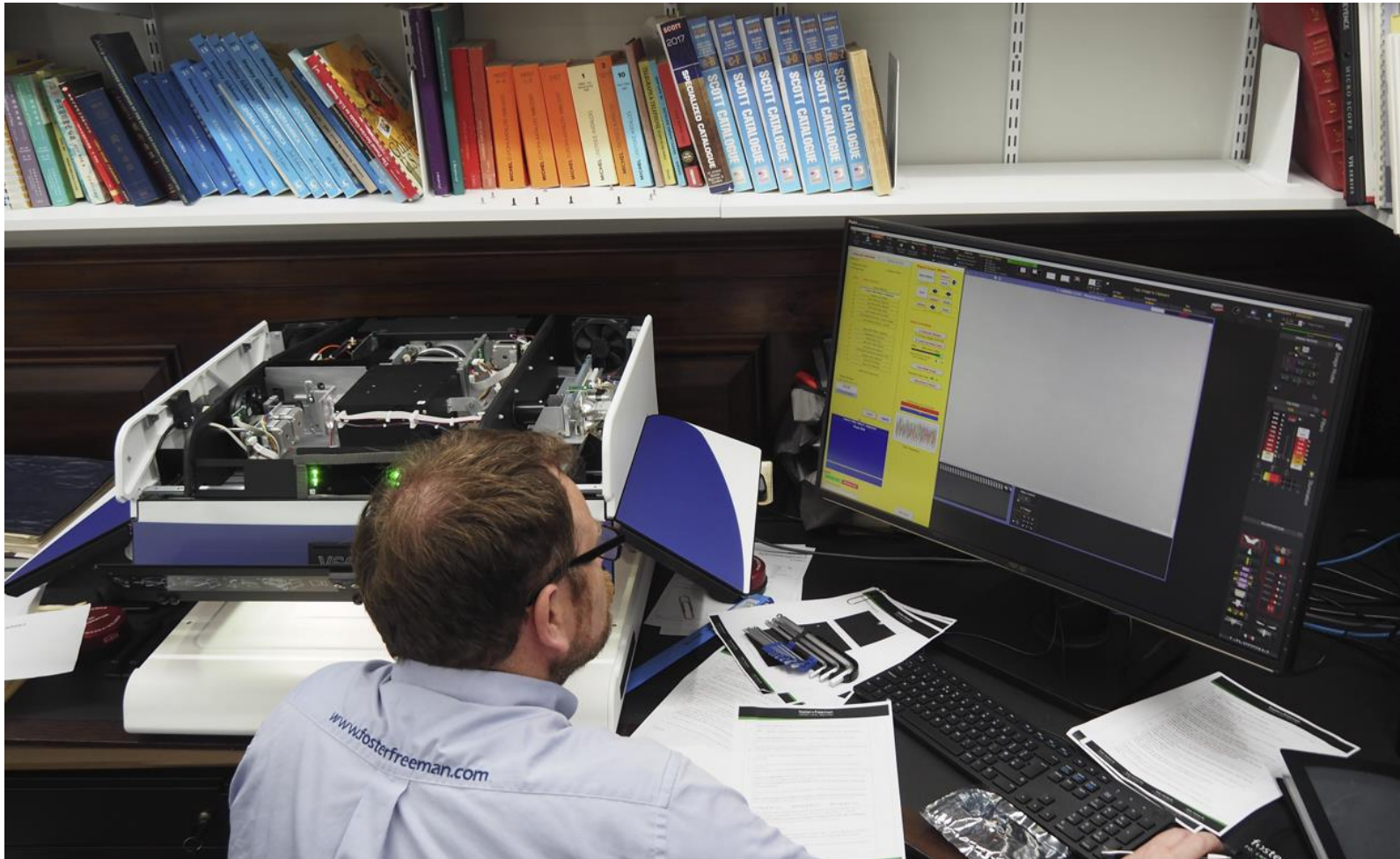


Expert Committee ~ Facilities



- Good eyes, extensive knowledge and reference collections .
- Ultra violet lamps with short (254nm) & long wave (315nm)
- Video Spectral Comparator (VSC 8000HS)
 - Examination of digital images under high magnification + 3D
 - Use of different light sources such as side-light or back-light
 - Ability to overlay a live image on a fixed image and to allow a strobe between the two. Motorised stage.
 - Wide range of wavelengths from ultra-violet to infra-red to measure ink absorption against a white reference
 - Colour tagging to emphasise colour differences not obvious to the human eye
 - Ability to repeat tests under the same conditions to build a picture of a range of reference points
 - Storage of test results that can be used again for other patients
- A Leica electronic microscope gives greater resolution e.g. for paper abnormalities

Using the VSC8000HS



September 2023

Using the Leica microscope with the VSC8000HS



The microscope helps with very high magnification and can be very useful for looking at over prints, paper fibre orientation and embossed material



Publication of results

The temptation for fraud from a fiscal cancellation



Figure 1.
40 rupee stamp under normal light.



Figure 2.
40 rupee stamp subjected to an orange filter.

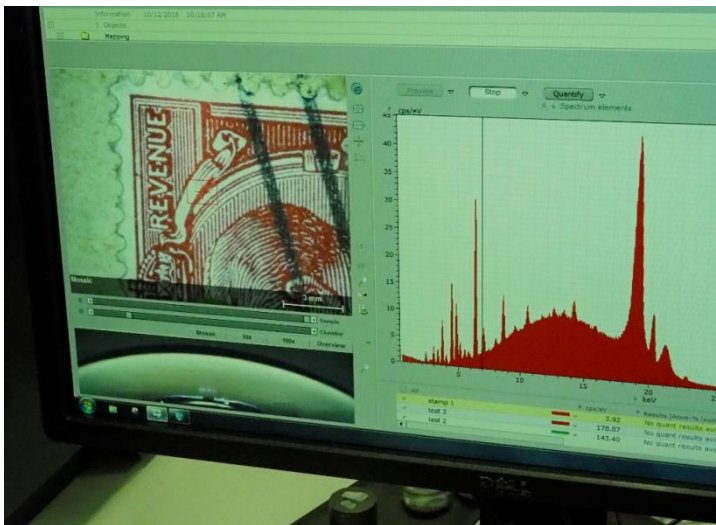
SHAW J and LEONARD P (2016) Forensic philately (3) Assessing whether a stamp has been manipulated for fraudulent purposes ~ removing a fiscal cancellation and adding a postal cancellation. London Philatelist **125** (1435) 188 – 189.

Using potential equipment available to the Expert Committee



The benefit of such determinations will be considered in terms of cost. Specialist equipment that is suitable for philately may be hired e.g. using the Bruker μ XRF

- Examination of stamps non-destructively using X rays
- Determination of paper constituents & metal contaminants
- Challenge of data interpretation and need for reference standards

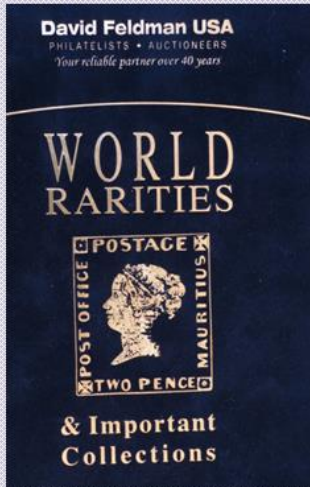


Working at the University of
Warwick, November 2018



Using potential equipment available to the Expert Committee. The Keyence 3D Microscope

The need for Expertising e.g. The Mauritius Printing Plate



3 – D Image kindly provided by Keyence

Results of using a 3 D microscope to explore how the Mauritius printing plate was made.



Using potential equipment available to the Expert Committee

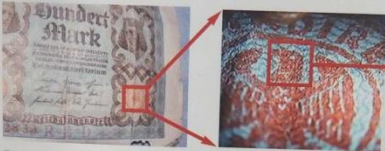
CASE STUDY

Analysis of ink used on German bank notes

Using the external beam it is possible to scan an area of 3mm x 3mm and simultaneously conduct a range of different analysis techniques (PIXE, RBS, NRA).

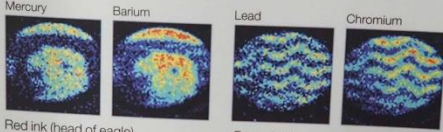
To demonstrate the versatility of the external beam and show the non-destructive nature of the analysis, a German bank note from the 1920s was analysed.

Analysis of the red ink used for the Reich eagle shows that it is made up of Hg and Ba. Analysis of the green lines behind the eagle's head shows that they contain Pb and Cr. After analysis the bank note was unmarked.



Scanned area

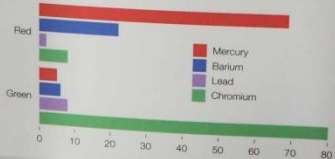
Photograph of 100 Reichmark note showing enlargement of area scanned by external beam



Mercury Barium Lead Chromium

Red ink (head of eagle) Green ink (wavy lines)

3mm x 3mm elemental maps, showing constituents of red (Reich eagle's head) and green inks (wavy lines)



Color	Mercury	Barium	Lead	Chromium
Red	~55%	~25%	~10%	~10%
Green	~5%	~5%	~70%	~20%

Relative percentage of metals in red and green ink determined using PIXE

www.ionbeamcentre.co.uk

EPSRC
Engineering and Physical Sciences Research Council



Dr. Mel Bailey at the Ion Beam Centre. Working at the University of Surrey, December 2017

The Expert Committee has access to several Reference Collections e.g.



- The Society owns several exceptional reference collections:-
 - H.C.V. Adams - Great Britain King George V Proofs
 - Louis Bradbury - Bahamas
 - Eric W. Mann - Natal
 - Theodore Groom - Greece Hermes Heads
 - Dr. F. E. Wood - Sungei Ujong
 - David Bernhard - Nevis
 - James Cummings - modern GB, USA, Sweden, Norway, Denmark
 - “Foreign” UPU distributions up to circa 1980 (courtesy of our Patron)



Forensic Philately

Bill Barrell ~ You Tube video: 60k views

[Soaking Penny Blacks off an 1840s Wrapper:](#)
[#philately 32 - YouTube](#)

II



, Basic, VSC8000HS, Serial Number 43529
16:40:27 10/11/2022 Lights=Flood (VIS), Longpass=VIS, Mag=4.01, White Balance=139(R) 238(B)
Auto Exposure (Integration=118ms, Iris=50%), Brightness=50, Gamma=Off, Imaged width=92 mm

¶



, Basic, VSC8000HS, Serial Number 43529
16:53:45 10/11/2022 Lights=Flood (VIS), Longpass=VIS, Mag=8.0, White Balance=139(R) 238(B)
Auto Exposure (Integration=78ms, Iris=50%), Brightness=50, Gamma=Off, Imaged width=46.2 mm

¶



The stamp has an apparent inverted overprint of O. S.



O. S.		(O 3)	
1899-1901. Optd with Type O 3, W 13, P 13.			
O80	24	1d. yellow-green (12.2.00).....	17 00 600
		a. "O.S." inverted.....	£110
		b. No stop after "S".....	65 00
O81	11	1d. rose (2.9.99).....	23 00 140
		a. "O.S." inverted.....	£100 60 00
		b. "O.S." double.....	7 35 00
		c. No stop after "S".....	80 00 16 00
O82	12	2d. bright violet (1.6.00).....	26 00 80
		a. "O.S." inverted.....	90 00 38 00
		b. "O.S." double.....	—
		c. No stop after "S".....	65 00 16 00
O83	22	2½d. indigo (2.10.01).....	70 00 19 00
		a. "O.S." inverted.....	£300 41 20
		b. No stop after "S".....	£200
O84	17	4d. violet (18.11.00).....	65 00 55 00
		a. "O.S." inverted.....	£325
		b. No stop after "S".....	£180
O85	18	6d. blue (8.10.00).....	32 00 55 00
		a. No stop after "S".....	£100
1891 (May). Optd as Type O 3 but wider, W 13, P 10.			
O86	19	2½d. pale violet.....	£5500 £4750
O87	5	5s. pale rose.....	£6000 £5000
Only one sheet (60) of each of these stamps was printed.			
The use of stamps overprinted "O S" was made invalid by the Posts and Telegraph Act of 3 November 1902.			
South Australia became part of the Commonwealth of Australia on 1 January 1901.			
NEW INFORMATION			
The editor is always interested to correspond with people who have new information that will improve or correct this catalogue			

The stamp overprint of O.S. can be compared with reference books, photographic records, auction images and consultants material.

O.S.		O.S.	
(O 1)		(O 2)	
B. General			
1874-77. Optd with Type O 1, W 2.			
(a) P 10			
O1	3	4d. dull purple (18.2.74).....	£2000 £400
(b) P 11b-12b+10			
O2	1	1d. green (2.1.74).....	— £375
O3	3	4d. dull violet (12.2.75).....	95 00 5 00
O4	1	6d. Prussian blue (20.10.75).....	£130 11 00
O4a	3	2s. rose-pink.....	—
O5	2	2s. carmine (3.12.76).....	— £140
(c) P 11b-12b			
O6	1	1d. deep yellow-green (30.1.74).....	£2500 £350
a. Printed on both sides.....			
O7	3	3d. on 4d. ultramarine (26.6.77).....	£5000 £2250
a. No stop after "S".....			
O8	6d.	dull violet (13.7.74).....	70 00 7 00
a. No stop after "S".....			
O9	1	6d. bright blue (31.8.75).....	£180 18 00
a. "O.S." double.....			
O10	6d.	Prussian blue (27.3.74).....	£160 90 00
a. No stop after "S".....			
O11	4	9d. red purple (22.3.76).....	£3000 £1200
a. No stop after "S".....			
O12	1	1s. red brown (3.8.74).....	£3750 £1800
a. "O.S." double.....			
a. "O.S." double.....			
O13	3	2s. crimson-carmine (13.7.75).....	£300 80 00
a. No stop after "S".....			
b. No stop.....			
c. Stops at top of letters.....			
1876-85. Optd with Type O 1, W 8.			
(a) P 10			



It is possible to compare the dimensions, definition and printing method with reference material



VSC6000 User, Paul, VSC6000, Serial Number 60425
14:47:20 20/03/2014 Lights=Flood, Longpass=VIS, Mag=7.99
Auto Exposure (Integration=58ms, Iris=50%), Brightness=60, Gamma=Off, Imaged width=40.55 mm



This stamp has many forensic attributes



To combat fraud, postal authorities may add security features

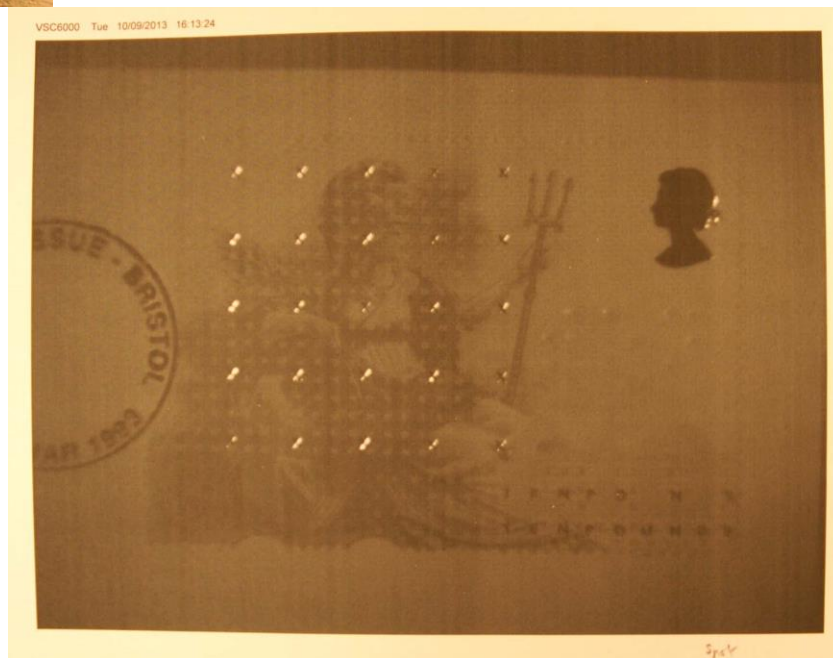


Security measures

Note different perforations,
use of braille & micro writing



The stamp may respond
to different wavelengths
of light



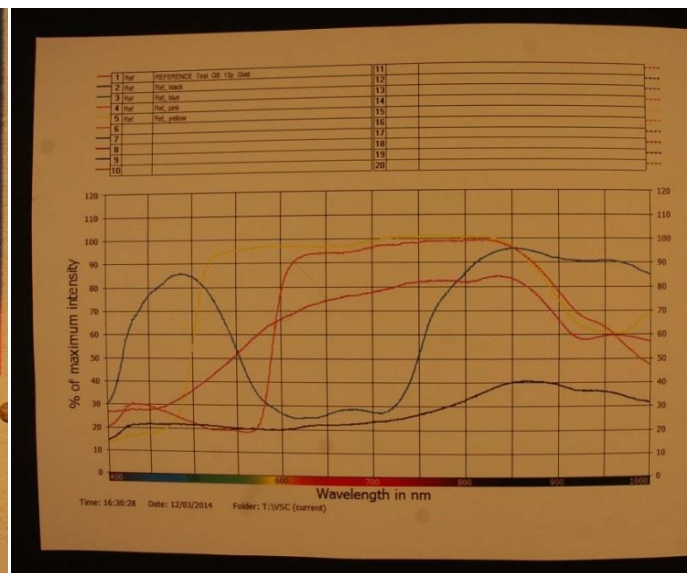


Provenance is helpful

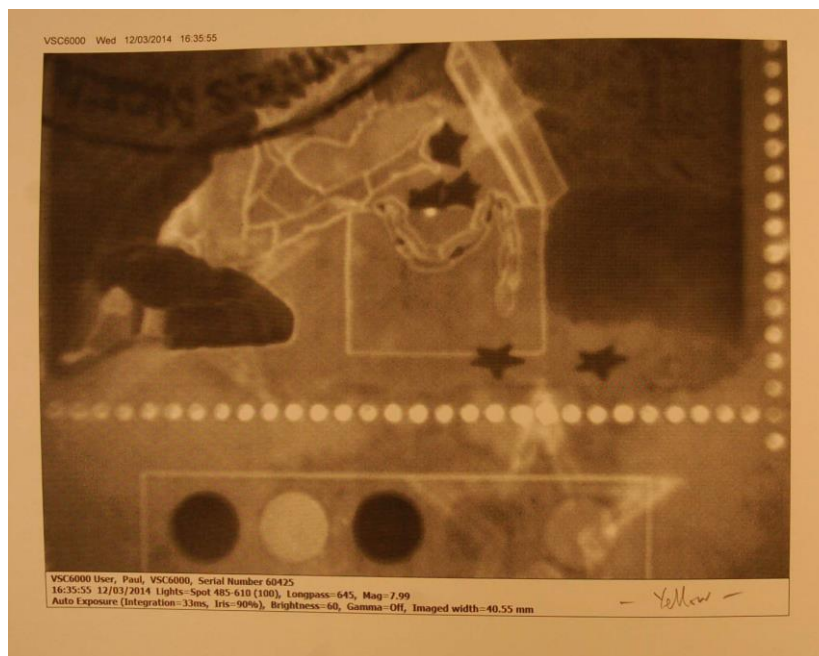


An artist with her design





Forensic analysis
of colours and
security measures



The spectrum
can be analysed



Completed expertising with 'is Genuine', signed by the RPSL Chairman. A 'Bad Certificate' has multiple signatures.

No. 206932

THE ROYAL PHILATELIC SOCIETY
LONDON

41 Devonshire Place
London W1G 6JY

Meeting of 10 NOV 2010

EXPERT COMMITTEE the item

New South Wales; 1860 S.G. No. 168

*Is rose-carmine - perf 13 - wmk double-lined
"12" - wmk sideways - trimmed perfs at left
and right - used - is Genuine.*

Paul Leonard
On behalf of the Committee

Submitted by *Paul Leonard*

“Bad” and “Good” Certificates



No. 222762

THE ROYAL PHILATELIC SOCIETY
LONDON

41 Devonshire Place
London W1G 6JY

Meeting of 24 FEB. 2016

AFTER COMPARISON


In the OPINION of The EXPERT COMMITTEE the item described as

Mauritius: 1858 S.G. No. 26

40 green - imperf - surcharge T4 - unused - has a Forged surcharge.

P. Halsey
P.H. On behalf of the Committee
P. Sharr
P. Sharr

222 762



Submitted by [REDACTED]

No. 217180

THE ROYAL PHILATELIC SOCIETY
LONDON

41 Devonshire Place
London W1G 6JY

Meeting of 15 JAN. 2014

AFTER CONSULTATION


In the OPINION of The EXPERT COMMITTEE the item described as

Great Britain: 1856 S.G. No. C8(1)

1D red brown - die II - alphabet III - blue paper - watermark large crown - perf. 14 - plate 35 - black four - used - is genuine.

OBS: rubbed at bottom right.

217 180



Renner
On behalf of the Committee

Submitted by [REDACTED]

Early forgeries – mostly not too difficult to tell



Genuine
First issue of
Queensland

Date 1860



Type 1



Type 2



Type 3

Forgeries by Spiro Brothers, Hamburg – date circa 1865



Early bogus stamps



Reprint of the first
cents issue of
Prince Edward
Island

Date 1872



10 cents



15 cents

Bogus values by Samuel Allan Taylor - circa 1872-75



Forgeries on genuine paper

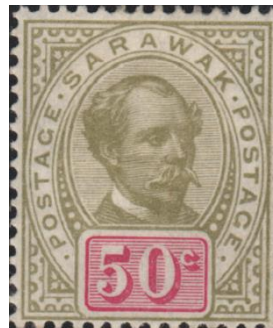
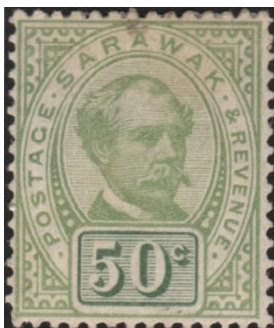
Genuine

Smeets
forgery



Smeets
forgery

Genuine
1888
POSTAGE &
REVENUE



Genuine
1899
POSTAGE
POSTAGE



possible Smeets forgery

Sperati – a very fine chemist & good eye for colour



Genuine 24c Green
Issued 1872
Wmk. Crown CC

Genuine 24c purple-brown
Issued 1883
Wmk. Crown CA



In 1885 onwards many values were surcharged due to shortage of low values.

- 24c Green was never issued with Crown CA watermark – by the time that Crown CA paper was introduced, the 24c colour had changed to purple-brown
- However, Stanley Gibbons for many years listed a 24c Green on Crown CA paper with the “FIVE CENTS” surcharge
- The “proving” example was in the Percy de Worms collection of Ceylon
- In 1980s the de Worms stamp was sold as part of the Isleham Collection
- It was examined and pronounced a forgery – made by Jean de Sperati

Sperati process – photo-lithographic reproduction



Sperati forgery – dated 18 January 1949 – proof in orange





Further examples of forgeries

Produced to mislead the unwary.

Rare Poste Par Avion overprint

BUT is it genuine?

The 40c was never officially issued ~ so a philatelic confection... ?





Highlights and Challenges

A Challenge: Getting the Experts' Room organised



26 September 2019



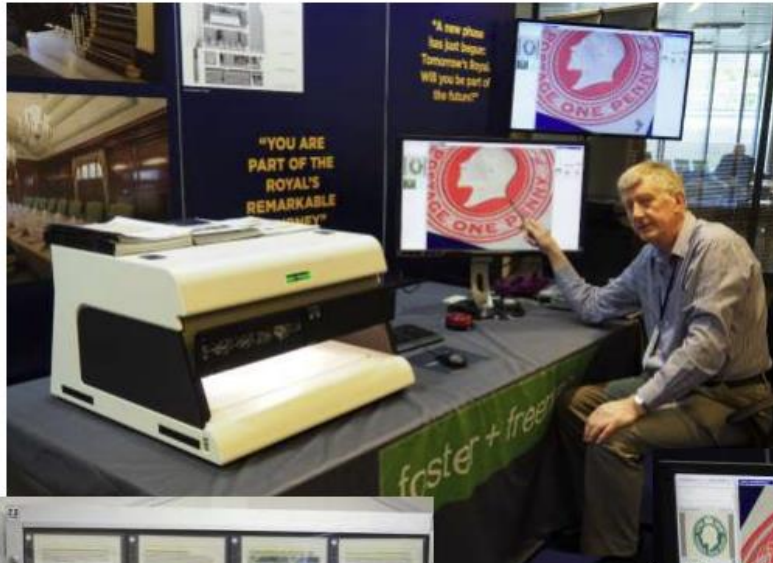
A Challenge: Covid & Our Lighting



Lighting ? /
Covid ?



Highlights : Use of the Video Spectral Comparator VSC 8000 at Stockholmia & use of Zoom



Forensic
philately
continues to
evolve



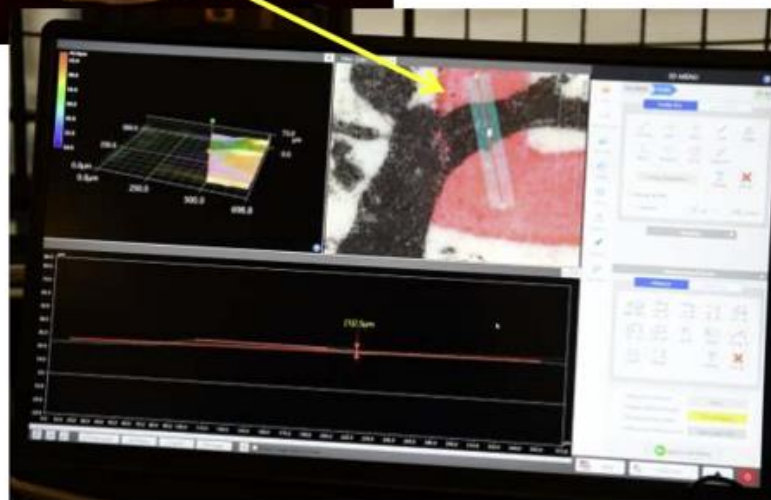
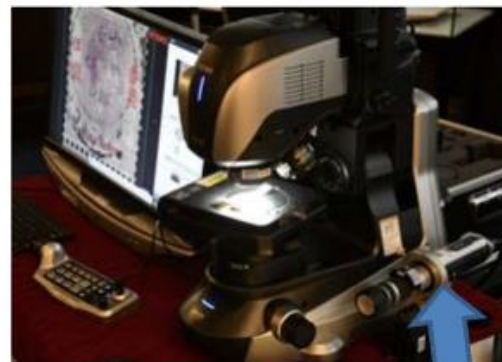
From
Display
Frame to
on-line
Zoom
...?





Highlights : Philatelic Research: Use of a 3D Keyence Microscope

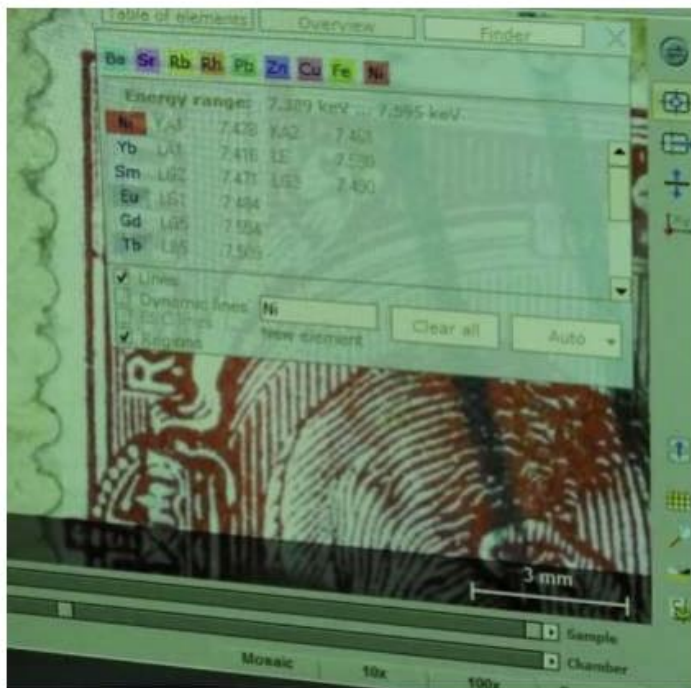
Identifying potentially fraudulently produced overprints



A Keyence
3D
Microscope

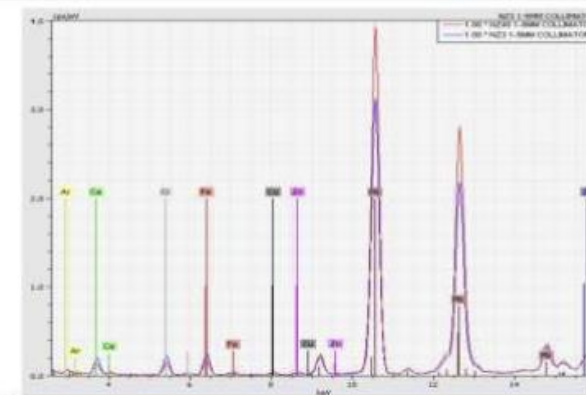


Highlights : Philatelic Research: Use of Bruker equipment



Determination of shades through elemental analysis (μ XRF) ?

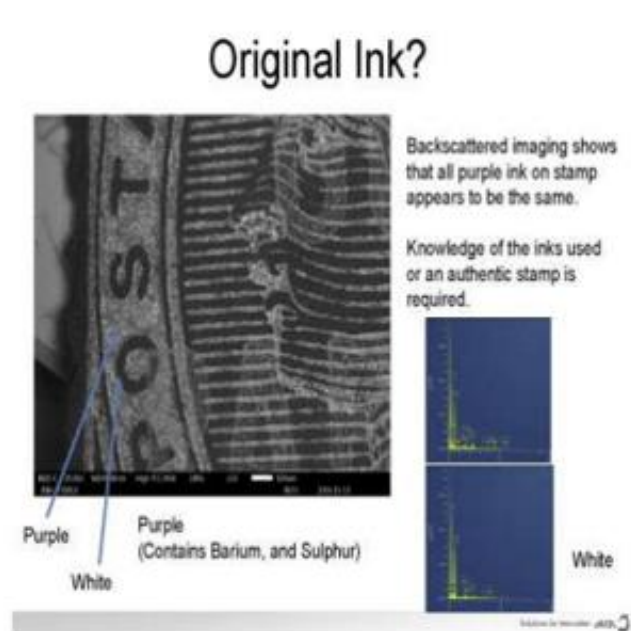
Comparison of NZ45 and NZ23, 1.5mm Collimator





Highlights : Philatelic Research: Use of Joel equipment

Identifying potentially fraudulently produced overprints using a Scanning Electron Microscope



The Joel Scanning Electron Microscope was used to examine the inks on the stamp to assess integrity & potential manipulation.

A Challenge: Use of the Video Spectral Comparator
VSC 6000



The rare Tiflis City 6 K stamp: Use of the sidelight function to show the embossing



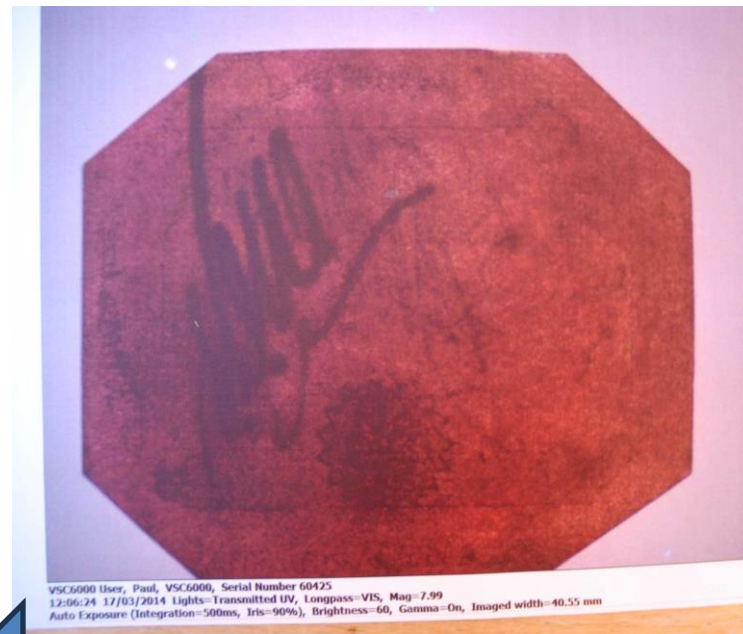
A Challenge: Use of the Video Spectral Comparator VSC 6000



The iconic 1 cent British Guiana, the worlds most valuable stamp, expertised at the Royal in 2014.



The British Guiana one cent magenta



STANLEY GIBBONS
THE HOME OF STAMP COLLECTING

Presents
**The British Guiana
1c Magenta**

The most expensive item by
weight in the world

Discover at Stanley Gibbons Stand 101x



Stampex
2023



Stampex 2023

Submitting your Material



By post to: Lucy Caulfield, Expert Committee,
RPSL Limited, 15 Abchurch Lane, London
EC4N 7BW.

E – mail : experts@rpsl.limited

Web site: www.rpsl.limited

Members of the RPSL and PTS can receive
discounted certificates.