

BELGIAN CONGO STUDY CIRCLE

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EDITOR'S NOTE: Word has been received from Mr. R. H. Keach that he has been going through dozens and dozens of proof sheets of the 1942 Ruanda issue and hundreds of proof sheets and file copies of the Congo 1942 issue. Most of his work is in recording the minor varieties, and it is his intention to record his findings and have a copy available in the Study Circle 'archives' in case anyone in the future becomes interested in the issues. He further reports a fair number of positions in the sheet can be identified, but there is no possibility of reconstructing sheets from single copies. See future Bulletins for more information.

NEWS AND VIEWS

Survey of members' interests. With this Bulletin, we are sending as a separate item the results of our survey. We leave it for you to draw your own separate conclusions, but it would appear the classic periods and postal stationery attract the highest degree of interest, and the high modesty of our membership is reflected when we all admit we have much to learn. Our thanks to our Secretary for tabulating the results.

New Members.

A hearty welcome to the Belgian Congo Study Circle for our newest members:

N. Rotenberg, BP1151, Kinshasa 1, Zaire

Ronald E. Strawser, 221 E. 89th, Odessa, Texas 79762, U.S.A.

Meeting 17 January, 1981.

Unfortunately, the January meeting in Bedford College was extremely poorly attended, only 4 members being present. This was clearly an advantage to those two members who were substantial room bidders in the auction and who came away with a goodly percentage of the material on offer. Our thanks are due to our President, Mr. Wood, who wielded the hammer in the manner born.

After a break for lunch, the meeting reconvened to view and discuss a detailed presentation of the Mols 25 centimes value, with Mr. Wood again in the chair. Many scarce items were included in the display, including the original photograph of the Inkissi Falls taken by Captain Wiyns, which was the source of that part of the Antwerp Exhibition Diorama which formed the basis for the 25c design.

As so few members were present, it was possible to view the display in a very leisurely manner and to discuss queries and anomalies. It may in fact, be that a second state of the frame plate of the original issue with the frame in yellow has been discovered and also a possible further state of the frame plate for the 1915 issue.

Copies of Previous Bulletins and Articles.

Our Secretary has informed the Editor he now has available copies of previous Bulletins at the cost of 3p per page plus postage (complete issues). If individual articles are desired, then the cost is 5p per page plus postage. Just drop a note to Secretary Foden to round out your library.

From the Publications.

The January 5, 1981 edition of Linn's Stamp News carries an article entitled "U.N. Undertakes Postal Operation for Congo Peacekeeping Activities" by Norris G. Robinson, Former U.N. Staff Member. Remarks with regard to Katanga have been questioned by our member, Joe Babicki with his letter to the Editor appearing in the Jan. 26th edition of Linn's.

Recent Awards for Exhibiting.

Two Vermeil awards were recently received by members. Joe Babicki of San Francisco displayed his Katanga cover collection at SUNPEX at Sunnyvale, Calif. and Ralph Jacquemin displayed his "Leopold's Private Domain" at the ARIPEX held in Phoenix, Arizona.

THE PERFORATIONS OF THE MOLS ISSUES

PART ONE: 1894 TO 1900

The perforations of the issues printed by Waterlow Bros and Layton are simple. The 3f 50c of 1898 is perf 14; the 10fr of 1898 is either perf 14 or perf 12. In addition a few sheets of trial compound perforations were made: perf 14x12 for the 3f 50c and perf 11x14 and 12x14 for the 10fr. The 3fr and 10fr of 1910 are always perf 14.

For the issues of 1894 to 1900 printed by Waterlow and Sons it is a very different story. There are numerous perforation varieties and irregularities which have never been fully analysed. Some of the early catalogues tried to do so, but found it a thankless task. The Gailly catalogue of 1925, for instance, includes a listing of the known perforation varieties of the issues from 1894 to 1896. It begins well enough with 6 different simple perforations ($13\frac{1}{2}$ to 16) and 9 compound (13x14 to 16x15 $\frac{1}{2}$), but when it comes to the combined mixed and compound perms - ie where there is more than one gauge on one side of the stamp - the list is almost endless and involves some horrifying algebraic expressions.

Later catalogues and specialists more sensibly gave up the task and described the perforations of the early Mols issues as being simply 'perf 12 to 16'. Even the collection of R H Keach, one of the most comprehensive and detailed ever assembled, does not attempt to differentiate the perforation varieties of the issues before 1909. And General Du Four, in his great work 'Congo: Cinquante Ans D'Histoire Postale', dismisses the perforations of this period in a single paragraph which ascribes the irregularities and varieties to the poor quality of the perforating machines used by Waterlows and the inexperience of the workers who operated them.

However the true story may not be so complicated as it appears on the surface. The number of different perforating machines cannot have been very great, and since only a small proportion of the stamps show compound or mixed perforations it seems likely that most of the machines had regular - and therefore identifiable - gauges.

In this study I shall show that this was indeed the case, and that while there were probably 9 or 10 perforating machines in use throughout the Mols period, the perforations they produced fall into 6 clearly defined groups, several of which are sufficiently distinct from the rest to be worth collecting separately.

Guatemala 2

The starting point for my study is an article by R H Keach which appeared in the BCSC Bulletin of January 1977. It consists largely of extracts from the second volume of a book by R A Goodman on the stamps and postal history of Guatemala, published by Robson Lowe in 1974. The relevance of 'Guatemala 2' is that it deals with stamps that were recess-printed by Waterlows at the same time as the Mols issues, so that it seems likely that the perforating machines used, and the varieties found, should match those of the Mols.

'Guatemala 2' identifies 8 different perforating machines. For the sake of those who do not have ready access to the earlier BCSC article, it is worth

repeating here its main findings in some detail. Mr Goodman begins by noting that the perforations were by single line machines and that there is no Guatemalan stamp in which the horizontal and vertical perforations appear to have been produced by different machines. (I believe this to be equally true of the Congo stamps, with the rare exception - to which I shall revert later - of the compound 14x15 perforations found in the 10c and 25c values of the third printing of the booklet stamps of 1915.) The article goes on to say that to study these perforations properly, they must be measured to the nearest decimal point using the Instanta gauge; the usual system of measurement to the nearest half-perforation would be quite inadequate.

The 8 perforations identified are as follows:

- A. Perf 15.6 to 15.8.
- B. Perf 14.9, varying slightly from 14.8 to 15.0.
- C. Perf 14.2 to 15.2, irregular.
- D. Perf 14.1, occasionally 14.0 or 14.2.
- E. Perf 13.9. There may have been more than one of these machines, and one of them may have been a repaired version of the irregular type F.
- F. As E, but showing a part of one or more sides perforated 11.8, 12.5 or between 13.1 and 13.8.
- G. Perf 13.7, regular.
- H. Perf 13.5, regular, with small holes and blunt, irregular teeth.

Chronologically Mr Goodman divides these 8 types into two groups: the 'old' machines that were in use when the Guatemala issue of 1902 first appeared, and the 'new' machines which were introduced subsequently. The first group comprises types A, C, E and F (possibly the same machine), G and H; the second group are B, D and E (probably a new machine or the old E with a new set of pins). The estimated approximate dates of usage are:

- A. Rare; used until 'not long after' 1902.
- B. From 1913 and probably 'some years older than that'.
- C. At least until 1906 and probably withdrawn shortly afterwards.
- D. Introduced not long after 1902, and at the latest by 1908.
- E. Found throughout the period, but probably includes both an 'old' and 'new' machine.
- F. The irregularity disappeared shortly after 1902; the machine may have continued in repaired form.
- G. In regular use from the start right through to the 1922 issue.
- H. As type A - scarce and in use until not long after 1902.

Mols issues of the Congo

The next step in my study was to compare these interesting findings by Mr. Goodman with the perforations on Congo stamps of the same period. Since I aim

to reconstruct sheets of all values and plate combinations I have a fairly large sample to go by: about 2500 single copies (ie excluding blocks and sheets) of the issues up to 1900, and about 6500 from the unilingual issues onwards. With such a sample it is possible to form a good picture both of the different perforations found on each value and of the relative frequency with which they occur.

Since I started collecting the Mols issues I have accurately measured and recorded the perforation of every stamp. When I started to compare my records with the extract from 'Guatemala 2' I was quickly struck by the obvious closeness between my own findings and those of Mr Goodman. Leaving aside two stamps where part of the perforation had clearly been faked to conceal damage to the stamp, all my copies matched one of the types listed by Mr Goodman, both in gauge and in approximate chronology. There is no doubt in my mind that the perforating machines used for Guatemala were mostly the same as those used for the Mols issues, and that to a large extent Mr. Goodman has accurately identified the different machines.

There were two main variations. First, I found no Mols stamp with type H, ie a regular 13.5 perforation with small holes. Second, I found a large proportion of pre-1900 stamps (particularly from the 1894 issues) with a regular 15.0 perforation which is unlikely to be type C and is too early for type B. The Guatemala issues did not start until 1902, and I surmise that there was an earlier machine, perf 15 regular, which does not appear on Mr Goodman's list.

Types A to G are all found on Mols stamps. Some, of course, overlap, and one cannot always be sure to which type a stamp belongs. Thus type C, which usually produces perf $14\frac{1}{2}$, $14\frac{1}{2} \times 15$ or $15 \times 14\frac{1}{2}$, can also produce perf 15 which cannot be distinguished from type B (or from the 'old' type B referred to in the previous paragraph). Similarly D and E may be hard to distinguish, and on a sheet I have with type F quite a few stamps are a regular perf 13.9 which individually could not be distinguished from type E. Type A however is quite distinct, as is type G (though it is just conceivable - albeit most unlikely - that a stamp with exactly 13.7 on all four sides could be produced by type F).

In addition one cannot be sure that each type corresponds with only one machine. From variations in the size of pinholes, I suspect that there were at least two perf 14.1 machines for the issues after 1900, although this will always be a matter of conjecture since variations in pinholes might have been caused not by different machines but by differences in the depth to which the pins were pushed through the paper. In some of the pre-1900 issues - particularly for some reason on the 40c - one finds a ragged perf 14 with very small holes indeed: does this represent a different machine within type E, or was it, as Du Four suggests, the result of carelessness by the machine operator?

We shall never know, and we cannot really hope to identify all the different machines and the stamps to which they were applied. Instead, in the remainder of this study I shall divide the perforation varieties into 6 easily identifiable groups as follows:

- (a) Regular
- (1) Perf 13.7 (ie type G) which I shall call perf $13\frac{1}{2}$ since the gauge does not vary by more than .05
 - (2) Perf 14 (ie between 13.9 and 14.2). This includes D, E and some stamps from F. It does not include C since perf

- 14.2 is only rarely found on C, and never on all four sides.
- (3) Perf 15 (mostly 14.9 and 15.0). This includes the 'old' perf 15 machine not listed by Mr Goodman, together with type B and some stamps from type C.
- (4) Perf 15.6 to 15.8 (ie type A) which for convenience I shall call perf 16 since in the majority of cases the gauge is 15.8. Strictly speaking, however, measurement of this type to the nearest half perforation produces stamps perf 16, $15\frac{1}{2}$, $15\frac{1}{2} \times 16$ and $16 \times 15\frac{1}{2}$, although the gauge is in fact very regular and does not vary by more than 0.2.
- (b) Irregular (5) Perf 11.8 to 13.9 (type F) which I shall call perf 12 to 14. Typically two opposite sides of the stamp are perf 14 while the other two are perf 14 over most of their length but a much wider gauge - 12 to $12\frac{1}{2}$ - over a portion. Portions at $13\frac{1}{4}$, $13\frac{1}{2}$ and $13\frac{3}{4}$ are also found.
- (6) Perf 14.2 to 15.2 which I shall call perf 14 to 15. This includes all stamps from type C except those which happen to be perf 15 on all four sides. Inspection of sheets perforated with type C shows that the gauge varies continuously and haphazardly between $14\frac{1}{4}$ and 15, so that one often finds (for instance) $14\frac{1}{2}$ on three sides of the stamp and 15 on the fourth, and vice versa. Measured to the nearest $\frac{1}{2}$, $14\frac{1}{2}$, $14\frac{1}{2} \times 15$ and $15 \times 14\frac{1}{2}$ are all commonly found, and (less commonly) $14 \times 14\frac{1}{2}$ and $14\frac{1}{2} \times 14$.

I am fairly confident that 4 of these 6 groups - namely nos (1), (4), (5) and (6) - represent single perforating machines. I believe that the regular perf 15 stamps come from two different machines and the regular perf 14 from probably at least three, spanning the whole period of the Mols issues.

Frequency of perforations on stamps of 1894 to 1900

The table on the following page shows the frequency of each of the 6 perforation groups among the stamps in my collection from the issues of 1894 to 1900, including local and typographed Congo Belge overprints. I have left out Princes stamps, which are always perf 14, and Brussels overprints of which my sample is too small to be of much statistical significance. Stamps with forged overprints are classified according to the underlying stamp. I have distinguished plate combinations, shades etc of each value where there appears to be a corresponding distinction in the frequency of perforation types found: for example, perf 16 is found on 11% of the 50c yellow green but on none of the earlier blue green printings.

The last column of the table shows the number of stamps from each sample. Those familiar with statistical theory will know that the larger the sample, the more significant are the percentage figures obtained, assuming that the sample is chosen at random. With a sample of 100, for instance, the percentages shown are likely to indicate within an accuracy of 10 to 15 percentage points the actual percentage of the whole printing that was perforated with the gauge in question. If the percentage shown is nil, one can say that the perforation is very rare if it exists at all.

Where the sample is small (which I define arbitrarily as less than 20) I have put the results in brackets because they are not really statistically

(continued on page 8)

MOLS 1894 TO 1900: RELATIVE FREQUENCY OF PERFORATIONS

		← - - - - REGULAR - - - - →				← IRREGULAR →		No. in sample
		p13 ⁺	p14	p15	p16	p12-14	p14-15	
<u>1894</u>	5c blue	-	3%	73%	-	3%	21%	33
	10c brown	-	-	83%	-	-	17%	54
	25c orange	-	11%	76%	-	3%	9%	127
	50c blue green	-	45%	23%	-	14%	18%	56
	" yellow green	-	43%	31%	11%	4%	12%	95
	1fr violet	-	35%	46%	-	2%	17%	63
	" lilac	-	42%	56%	-	2%	-	48
	5fr carmine	-	2%	63%	8%	4%	22%	49
<u>1895</u>	5c brown	-	36%	46%	1%	5%	13%	158
	10c green blue	-	27%	43%	-	8%	21%	113
	" blue green	-	20%	54%	22%	- *	4%	76
<u>1896</u>	15c I+A1 clear	-	28%	36%	17%	14%	5%	95
	" " corroded	5%	76%	12%	-	1%	6%	94
	" I+A2	-	(80%)	-	-	-	(20%)	15
	40c pale green	-	4%	70%	-	-	26%	23
	" blue green	-	39%	35%	12%	8%	6%	93
<u>1900</u>	5c I1+B1	-	26%	54%	3%	-	17%	93
	" I2+B2	14%	71%	8%	-	-	8%	51
	10c I2+B1	2%	29%	54%	-	4%	11%	103
	" I3+B2	9%	60%	20%	-	-	11%	45
	" I4+B3	6%	75%	-	-	-	19%	32
	25c I2+A2	14%	19%	45%	-	-	22%	109
	50c olive	-	17%	60%	-	-	22%	81
	" yellow-olive	7%	50%	14%	17%	4%	9%	109
	1fr carmine	48%	15%	13%	23%	1%	-	75
<u>Local</u>	5c I2+B2	4%	77%	5%	-	-	14%	57
	10c I4+B3	-	100%	-	-	-	-	47
	15c I+A2	3%	97%	-	-	-	-	32
	25c I2+A2	(6%)	(31%)	(31%)	-	-	(31%)	16
	" I3+A2	-	95%	-	-	-	5%	21
	40c	-	81%	7%	-	12%	-	42
	50c	2%	83%	5%	-	2%	7%	41
	1fr	67%	-	-	33%	-	-	55
	5fr	-	64%	32%	-	-	5%	22
<u>Typo</u>	5c	-	100%	-	-	-	-	20
	10c	-	-	32%	-	-	68%	25
	15c	-	57%	13%	-	-	30%	47
	25c I2+A2	48%	29%	5%	-	-	19%	21
	" I3+A2	-	53%	18%	-	-	30%	40
	40c	-	36%	3%	-	36%	26%	39
	50c	-	93%	1%	-	-	6%	71
	1fr	93%	-	1%	6%	-	-	69
	5fr	-	91%	3%	-	6%	-	33

Note 'Local' excludes Brussels handstamps and 'Typo' excludes Princes.

Because of rounding, the percentages in each row do not always add up to exactly 100%.

* Although I have no single copies of the 10c blue green perf 12 to 14 I do have a complete sheet.

significant.

The table reveals an interesting pattern. There are marked variations in the frequencies of perforation types found on different values. The 50c of 1900 (in the yellow-olive or ochre shade of the later printings) has the distinction of being the only stamp in the sample which shows all 6 perforation types. Generally speaking, particular perforations are associated with particular stamps, and perforations which are rare or non-existent on some stamps are common on others.

In the following paragraphs I analyse this phenomenon in more detail, perforation by perforation. I must stress that all statements about relative frequency etc relate to the sample studied; the fact that a particular perforation was not found in the sample does not, of course, mean that it does not exist, although it may strongly indicate that it does not.

Perf 13 $\frac{1}{2}$. This perforation is not found in issues before 1900, except in the later printings with corroded centres of the 15c of 1896. Nor is it found in the first plate combination of the 5c of 1900 or in the earlier printings (olive) of the 50c. I conclude that the perforating machine with the regular 13.7 gauge was introduced around or shortly after 1900.

Where perf 13 $\frac{1}{2}$ is found it is relatively scarce - less than 15% - except in two cases. The first is the 25c typo frame plate I2 where about 50% of the (admittedly small) sample show this perforation. (It is not found at all on the 25c with retouched frames.) The second and more conspicuous exception is the lfr carmine. One half of the unoverprinted stamps are perf 13 $\frac{1}{2}$, while the proportion rises to two-thirds for the local overprints and as high as 93% for the typo.

Perf 14. As is to be expected, this is the most common perforation on many of the values. But it is relatively scarce in the early issues: non-existent in the 10c brown, rare in the 5c blue and 25c orange, while my only copy of perf 14 in the 5fr comes from the late printing in pale rose carmine.

Turning to the later issues, perf 14 is relatively scarce in the early printings of the 15c and 40c, and in the 5c, 10c, 25c and 50c of 1900, but is much more common in the later printings of all those values. The local overprints are mostly perf 14 (100% in the case of the 10c) except that in the lfr local perf 14 is not found at all. In the typo perf 14 appears to be non-existent in the 10c and lfr, very common in the 5c, 50c and 5fr, and fairly common in the other values.

Perf 15. Another common perforation. However the pattern is the reverse of the perf 14: perf 15 is very common in the 5c, 10c, 25c and 5fr of 1894, and in the issues of 1896 and 1900 is much less common in the later than in the earlier printings. Apart from the 25c and 5fr it is scarce or unknown in the local overprints and is also rare in most of the typo values. It is relatively common, however, in the 10c typo.

Perf 16. This distinctive perforation (strictly speaking 15.6 to 15.8) is found in only a few values: the 50c yellow green, 5fr deep carmine, 5c red brown, 10c blue green, 15c early printings, 40c blue green, 5c green first plate combination, 50c yellow olive and lfr carmine. In the 5c brown it is very rare - only one out of my 158 copies - but by contrast it is common in the lfr carmine, and this is the only value in which it appears in the local and typo overprints. It is striking that whereas perms 14 and 15 are the predominant perforations for

most values, in the lfr carmine perfs $13\frac{1}{2}$ and 16 are predominant.

It is apparent from the table that the perf 16 machine was in use for only a few years, from the late 1890s to the early 1900s. This is consistent with Mr Goodman's conclusion that the machine was in use until 'not long after 1902'.

Irregular perf 12 to 14. As is to be expected, this irregular perforation is scarce where it appears at all because the machine which produced it also produced stamps showing a regular perf 14. (In my only example of a sheet perforated by this machine 65% of the stamps are regular perf 14 and 35% are irregular.) Almost all of the issues from 1894 to 1896 are found perf 12 to 14, as are the 10c, 50c and lfr carmine of 1900. In the local overprints it is found in the 40c and 50c, and in the 40c and 5fr typo. In the 40c typo it is relatively common and I strongly suspect that most or all of the regular perf 14 40c typo, which do not outnumber the irregular examples, also came from the irregular machine.

The irregular perforation is not found in the issues from 1909 onwards or in later printings of the 1900 issues. I therefore share Mr Goodman's view that the machine, which had been in use at least since 1894, was discontinued or repaired 'shortly after 1902'. Perhaps it was scrapped at the same time as the perf 16 machine.

Irregular perf 14 to 15. This one is quite common. I have several sheets of it in which only about one-third of stamps show a regular perf 15. To judge from the table the machine was used on all the Mols issue from 1894 to 1900 except the lfr lilac and violet. In some cases (eg the 10c typo) it probably accounts for all of the perf 15 stamps as well, whereas in others the much higher ratio of perf 15 stamps suggests that a regular perf 15 machine was also used. Neither perf 15 nor the irregular 14 to 15 are found in my copies of 10c local (I4+B3), 15c local (I+A2), lfr local or 5c typo.

PART TWO: 1909 ONWARDS

From the unilingual issue of 1909 onwards the perforations are simpler. It is well known that most stamps are perf 14 but that many values and plate combinations are also found, much less commonly, with perf 15. With this in mind I did not expect any great surprises when I went through all my post-1909 stamps to measure accurately their gauges and compare them with the perforation types listed by Mr Goodman.

I was, however, surprised. I found not 2 but 4 of the 6 perforation types described in the first part of this article. Out of 6377 single copies of Mols stamps (including Ruanda Urundi) after 1909, 5519 or 87% are perf 14; 658 or 10% are perf 15; 161 or 3% are perf $13\frac{1}{2}$ (ie the regular perf 13.7 gauge listed by Mr Goodman as type G); and 37 or $\frac{1}{2}$ % are irregular perf 14 to 15, ie 14.2 to 15.2 or type C. In addition I have two booklet stamps with the rare compound perforation 14x15. Perf $13\frac{1}{2}$ is found on two of the unilingual values, most of the 1910 values and several of the 1915 values: irregular perf 14 to 15 is found only on three values of 1910.

Thus while my studies have shown that the perforation varieties up to 1900

may be less complicated than is usually supposed, they have also shown that the perforations after 1909 are more complicated than the conventional wisdom has given them credit for.

At this point I should comment on the statement, made by Mr Keach in Bulletin articles in November 1959 and November 1973, that in the stamps after 1909 'intermediate perforations of $13\frac{1}{2}$ to $14\frac{1}{2}$ are of little interest as the range of $13\frac{1}{2}$ to $14\frac{1}{2}$ can be found in a single sheet'. I have about 50 sheets post-1909, and none of them show this variation. On the other hand I have 2 sheets (1910 40c and 1921 10/5c), 1 booklet pane (10c third printing), 2 blocks and 161 single stamps which show an exact gauge of 13.7 throughout the perforations, horizontal and vertical, and which therefore correspond with Mr Goodman's type G. By contrast my perf 14 sheets and stamps are mostly 14.1, occasionally 14.0 and 14.2, and rarely 13.9, and so correspond with types D and E. I conclude therefore that perf $13\frac{1}{2}$ is a genuine perforation variety. If it were merely produced by variations within the sheet the laws of chance would insist that my sample of thousands of stamps should include - which it does not - $13\frac{1}{2} \times 14$ or $14 \times 13\frac{1}{2}$.

Similarly with the irregular perforation 14.2 to 15.2. I have 37 single stamps and a block of four, all from the 1910 and 1921 sets, which throughout show exactly the same sort of continuous variation in perforation, mostly between $14\frac{1}{2}$ and 15, that is found on my pre-1909 sheets with perforation type C. Again I conclude that this represents a genuine perforation variety on the 1910 and 1921 stamps.

In the following paragraphs I analyse the incidence of each perforation type in the post-1909 issues. As with the earlier issues, the less common perforations are associated only with particular stamps, which further strengthens the argument that they represent genuine varieties.

Perf $13\frac{1}{2}$

The following table is similar to the one on page 7 and shows the relative frequencies of perf $13\frac{1}{2}$ stamps in the samples studied. The samples are mostly relatively large; where they are less than 20 the percentage figure is in brackets since it does not have much statistical significance. '-' means 0%; a blank means that the stamp itself does not exist. R means that perf $13\frac{1}{2}$ was not found in the sample but probably exists because it was found on the same stamp with overprint or vice versa.

	<u>5c</u>	<u>10c</u>	<u>15c</u>	<u>25c</u>	<u>40c</u>	<u>50c</u>	<u>1fr</u>	<u>5fr</u>
1909 uni.	12%	-	-			12%		
1910	6%	1%	3%	11%	8%	R	-	-
1915	2%	3%	4%	1%	1%	-	$\frac{1}{2}\%$	2%
1918 Red Cross	-	-	-	-	-	-	-	-
1921	8%	13%	R	7%	13%	1%	-	-
1922 Malines	6%	1%		2%	-	-		
1922 Boma	2%				7%			
1916 Tombeur	-	-	(73%)	-	-	-	-	-
1916 EAA	-	-	-	-	-	-	-	-
1918 AO	-	-	-	-	-	-	-	-
1922 EAA Mal	-	-						

(nb: for the overprinted stamps the table refers to the underlying value, not the value of the overprint)

The table shows that perf 13½ is not found at all on the Red Cross set or on any of the Ruanda Urundi issues, with the sole exception of the 15c Tombeur where it accounts for 8 out of my 11 copies. In the unilingual issue perf 13½ is found on the 5c and 50c but not on the 10c or 15c; on the 50c it is found only in the brown-olive shade, of which it accounts for nearly one third of my copies. In the 1910 and 1915 sets perf 13½ is found on most values but is usually scarce and is associated only with certain plate combinations as follows:

<u>1910</u>	5c:	IIII1+B3, IIII1+B3 corroded, IIII1+B4, IIII2+B4
	10c:	IIII1+C1, IIII2+C2
	15c:	IIII1+A, IIII2+B1
	25c:	III1+A3 (15% of copies), III1+A4, II2+A4
<u>1915</u>	5c:	VI+E, VI+F, 3rd booklets
	10c:	V+D2, V2+E, 3rd booklets
	15c:	III4+B3, V+C2
	25c:	III+C, III+D
	40c:	I+A2
	1fr:	II5+A5 (rare)
	5fr:	III+A2
<u>1921</u>	5c:	III2+B4, IV+D1 (14% of copies)
	10c:	III2+C2, IV+D1 (both carmine and carmine-lake)
	25c:	III1+A4, II2+A4 (7 out of 14 copies)
	50c:	IIII1+A2 (rare)
<u>1922</u>	5c:	VI+F (12% of copies)
Mal.	10c:	V2+E
	25c:	III+D
<u>1922</u>	5c:	VI+F surcharge C
Boma	40c:	II+A2 sur. C (8 out of 24 copies)

(nb: references are to the face values of the underlying stamps, not the overprint)

Perf 14

This is much the most common perforation and usually accounts for 75% or more of the copies of each stamp. The few cases where it accounts for 2/3rds or less are listed below in ascending order of frequency; where the sample is small, however, the percentage figure may not have much significance.

5fr Tombeur Kigali	nil	(all stamps are perf 15)
" " Grysolle	probably ditto	
1fr Tombeur Kigali	all perf 15	
15c Tombeur Havre	20%	perf 14 (2 out of 10 copies - rest p13½)
10c 1910 IIII1+C2	44%	" (15 " 34 " " p15)
5c 1921 IIII1+B4	48%	" (10 " 21 " " p15)
25c 1921 II2+A4	50%	" (7 " 14 " " p13½)
40c Mal II+A3 carmine	53%	" (9 " 17 " " p15)
15c 1910 IIII2+B1	55%	" (6 " 11 " " mostly p15)
10c 1915 3rd booklet	56%	" (14 " 25 " " mostly p15)
5fr 1910	56%	" (23 " 41 " " p15)
25c 1910 III1+A3	59%	" (51 " 87 " " various)
5c 1921 IV+D1	61%	" (36 " 59 " " p13½ & 15)
40c Boma II+A2 sur. C	63%	" (15 " 24 " " mostly p13½)
15c 1915 IIII5+C1	64%	" (27 " 42 " " p15)
50c 1915 IIII3+B br-lilac	65%	" (11 " 17 " " p15)
5c EAA Mal. VI+F	67%	" (20 " 30 " " p15)
5fr 1915 III1+A2	67%	" (80 " 119 " " mostly p15)

Irregular perf 14 to 15

This irregular perforation is found only on the first plate combinations of the 25c, 40c and 50c of 1910, with or without the 1921 overprint. It is clear that the perforating machine (Mr Goodman's type C) was withdrawn shortly after 1910. The table of relative frequencies is as follows:

	<u>25c</u> (III1+A3)	<u>40c</u>	<u>50c</u> (IIII1+A2)
1910	20%	20%	R
1921	R	3%	14%

The type C machine also of course produced stamps perf 15, and the question arises whether these 3 1910 stamps were perforated by type B (regular perf 15) as well as C. The corresponding relative frequencies for perf 15 are 1910: 7%, nil and nil (R) and 1921: nil (R), 3% and 3%. From this I conclude that machine B was probably not used for these three values and that where they are perf 15 rather than $14\frac{1}{2} \times 15$, $15 \times 14\frac{1}{2}$ etc they were nevertheless perforated by machine C

Perf 15

The table of relative frequencies is as follows. Because of the overlap between perf 15 and the irregular $14\frac{1}{4}$ to 15, the percentages shown against 1910 and 1921 include the latter.

	<u>5c</u>	<u>10c</u>	<u>15c</u>	<u>25c</u>	<u>40c</u>	<u>50c</u>	<u>1fr</u>	<u>5fr</u>
1909 uni.	-	-	-	-	-	-	-	-
1910	5%	17%	14%	18%	20%	R	19%	44%
1915	6%	18%	14%	7%	10%	9%	6%	15%
1918 Red Cross	11%	9%	11%	13%	8%	12%	-	-
1921	26%	9%	1%	8%	6%	14%	32%	9%
1922 Malines	7%	8%	-	4%	11%	-	-	-
1922 Boma	2%	-	-	-	13%	-	-	R
1916 Tombeur	-	-	-	(20%)	-	(25%)	(20%)	100%
1916 EAA	28%	22%	9%	4%	19%	-	-	14%
1918 AO	28%	8%	24%	9%	11%	7%	-	-
1922 EAA Mal	21%	4%	-	1%	4%	-	-	-

It will thus be seen that perf 15 is relatively common on the 5fr of 1910, the 10/5c of 1921 (particularly IIII1+B4 and IV+D1), the 1fr of 1921 (with III1+A3 and III1+A4 equally common), the 5c EAA and EAA Mal (both V2+E and V3+F), the 10c EAA and the 5c and 15c AO. Among the Tombeur stamps with the Havre overprint, the 25c is found perf 15 with 'Ruanda' only while the 50c is found with both 'Ruanda' and 'Urundi'. The figures in the table for the 1fr and 5fr Tombeur refer to Kigali and Grysolle overprints.

The following plate combinations (excluding stamps shown as '-' in the table) are not known perf 15:

<u>5c</u>	1910 III2+B4, III2+C, IV+D1, IV+D2; 1921 IIII1+B3, III2+B4; 1922 Boma VI and V2+E surcharge B and C, VI+F surcharge F; EAA narrow overprint.
<u>10c</u>	1910 IV+D1; 1921 IIII1+C1; 1923 Elisabethville; EAA narrow overprint
<u>15c</u>	1910 IIII1+A4, IIII1+A7, III3+B2, III3+B3; 1915 IV2+C1; 1921 IIII1+A3, IIII1+A4, III3+B3; EAA narrow overprint.

- 25c 1910 II2+A4, II3+B; 1921 III+A3, II2+A4, II3+B; 1922 Malines IIII+B red and carmine surcharges, III+D red; EAA narrow overprint; EAA Malines IIII+B red and carmine.
- 40c 1922 Malines II+A2 red surcharge; Boma II+A2 surcharges B and D; EAA Malines red surcharge.
- 50c 1910 IIII2+A3; 1921 IIII2+A3.
- 1fr 1910 III+A4; 1915 II2+A5, II4+A5, II6+A5, II6+A6.

In addition perf 15 is not known in any of the 1st or 2nd printings of the 1915 booklet stamps, except in the second printing of the 25c.

The following are scarce and difficult to find with perf 15:

- 5c 1910 IIII1+B3 corroded, IIII2+B5; 1915 VI+F; 1921 IIII2+B5; 1922 Malines V2+E; 1922 Boma; EAA V3+F.
- 10c 1910 IIII2+C2; 1915 V2+E; 1921 IV+D1 carmine lake; 1922 Malines V2+D2; EAA Malines.
- 15c 1910 III1+A5, III1+A6; 1915 V+C1; 1921 III1+A6, III1+A7, IIII2+B1, IIII3+B2.
- 25c 1915 IIII+D; 1922 Malines IIII+C, IIII+D; EAA IIII+C; EAA Malines IIII1+B, IIII+C; 1915 2nd and 3rd booklets.
- 40c 1922 Malines II+A2; 1922 Boma II+A2, II+A3 (except surcharge C); EAA Malines.
- 50c 1910 IIII1+A2; 1915 IIII3+A4 brown lilac.
- 1fr 1915 II5+A5, IIII+A7.
- 5fr 1922 Boma; EAA narrow overprint.

Compound perf 14x15

Perf 14x15 is found only on the 10c and 25c of the third printing of the booklet stamps of 1915. The 10c is scarce and the 25c is rare - possibly unknown in the used state. For some reason different perforating machines were used for the vertical and horizontal perforations. In my block of the 10c the gauge is 14.1x15.1.

A copy of the 50/25c Malines with compound perforation 14x15x14x14 was reported in the BCSC bulletin of November 1973. It was suggested that when perforating vertically the machine broke down and the sheet or sheets were transferred to another machine. To my knowledge, however, no other such compound perforations have been reported, although it is well worth looking out for them.

Conclusion

I hope I have demonstrated in this study that the perforation varieties of the Mols issues deserve more attention than they have received hitherto. I have shown that there are 6 varieties or groups of varieties in the issues up to 1900 and 4 in the issues from 1909 onwards. I believe that they are all worth collecting separately. The perf 13½ and perf 16 varieties are especially worth separate attention because they are distinctive, represent each a single perforating machine, are scarce, and are found only on particular values and plate combinations. Much of the excitement of philately lies in finding new varieties that have not been found before, and I am sure that

perfs 13½ and 16, to say nothing of the other varieties, offer scope for new discoveries.

The accuracy of the analysis above is naturally limited by the size of the sample of stamps which was available for me to study. I would be glad to receive observations from any member who has also studied the perforations closely. I would be particularly interested to hear of any omissions in my listings of stamps found with each perforation variety, notably the table on page 7 of the pre-1909 issues and the list on page 11 of post-1909 stamps which are found with perf 13½. I have no doubt that there are gaps in those lists.

B. P. HUDSON

MASKS AND IDOLS SERIES 1947 - 1950

I was very interested to read Mr. Foden's speculative article on the printing of these stamps in Bulletin No. 38.

On the subject of the possible use of an offset roller in recess printing Mr. Foden writes 'How this latter method would give a satisfactory result in recess-printing, the writer finds it difficult to understand ...'; in this he and I are of one mind. Recess printing is an expensive process and justified only by the result, a 'clean cut' design with depth to the inked lines. As Mr. Foden states, the offset roller would need to be of rubber or of other non-absorbent resilient material that could be pressed into the engraved lines on the plate and suck out the ink therefrom. When the paper was, in turn, pressed onto the offset roller any depth of ink on it would be squashed producing thick uneven lines with no depth to the ink. I can understand the possible use, although not the advantage of an offset roller in letter-press printing but I need convincing proof that it can be used to produce engraved stamps. Many of the single colour stamps and of the frames of the bicoloured stamps do have very blurred lines - who saw a nice clean frame of the 1,25fr Ruanda? - and I accept that these could have resulted from using an offset roller. Blurring of the lines always seems to be downward and this is consistent with an offset roller having been used and in a direction such that the top of each stamp was printed first, any surplus of ink then being spewed out in a downwards direction.

An offset roller would either have to be continuously wiped between each application of the printing paper and re-inking or would have to be accurately 'in phase' with the printing plate so that the ink from any spot on the plate was always applied to exactly the same spot on the roller; otherwise any ink on the roller, not absorbed by the paper, would very soon produce a roller with patches of ink

all over it. If either of these conditions obtained and if frames were printed before the ink of the centres was dry, would not centre plate ink on the roller either be wiped off or appear on the next sheet of stamps in exactly the same position as it came from? I think that the centre plate 'extraneous' ink to which Mr. Foden refers is such as is frequently found immediately above the 'hats' on the 1fr and 6fr values. In the latter case there is no great concentration of ink at the top of the hat and this should have dried much more quickly than the lower parts of the hat where inking was heavy; the lower parts of the hat always seem to be clear and here you might expect there to be a lot of smudging due to the pressure of the offset roller before the ink was dry.

These are very scattered and rather incoherent thoughts but, overall, I find it very hard to believe that the use of an offset cylinder explains the curiosities of inking of these stamps any better, indeed not as well as, a faulty ink wiper on a normal cylindrical printing plate.

R. H. KEACH

THE FIRST 5 F Mols (1894-1909)

Addendum to Bulletin No. 35, pages 18-22.

- No. 5 Little red speck in top margin, above first D of INDEPENDANT (not in 'Princes').
- No. 11 Nearly vertical red scratch in left margin at mid-height.
- No. 17 Nearly horizontal black line in right margin, under top right figure 5 and extending from No. 17 to No. 18.
- No. 19 Nearly vertical red scratch in upper left 5.
- No. 24 Nearly vertical red scratch in the left margin to the left of the bottom left figure 5 (not always visible).
- No. 26 Vertical red dotted scratch in left margin and the bottom quarter of the stamp (faint on "Princes").
- No. 30 Two parallel nearly vertical black scratches between the right frame lines at mid height (not in 'Princes').
Two horizontal thick and short black lines in bottom margin (not in 'Princes').
- No. 32 Re-entry of the base of the left 'chalice'.
A long horizontal red scratch in bottom margin, under FRANCS.
- No. 47. Re-entry of the upper part of the circle around the top right 5.

ABBE G. GUDENKAUF

18.



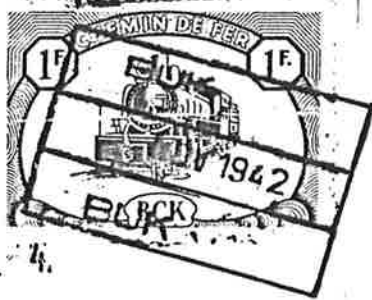
1



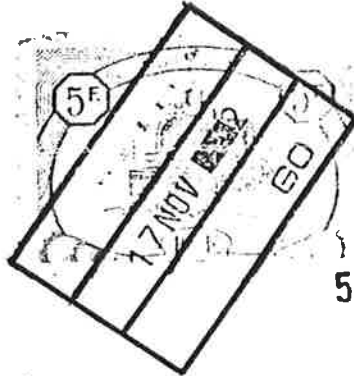
2



3



4



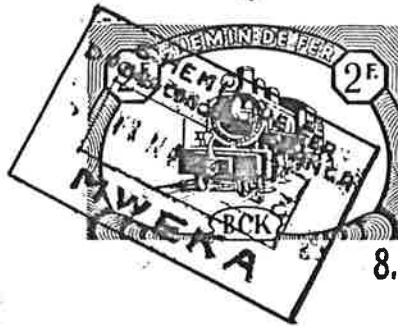
5



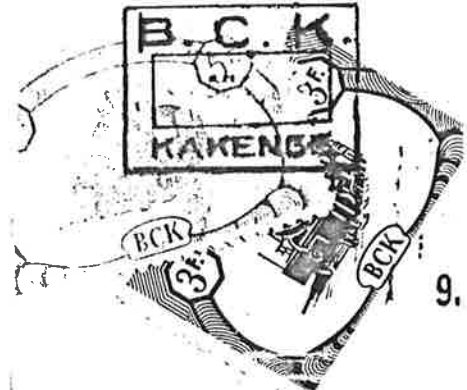
6



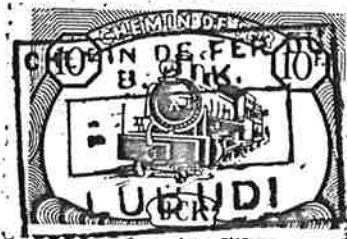
7



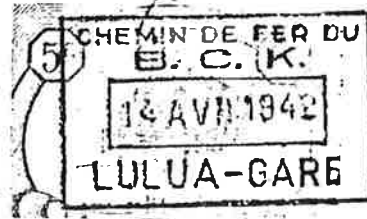
8



9



10



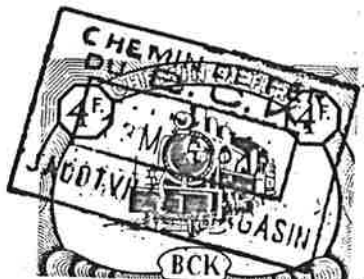
11



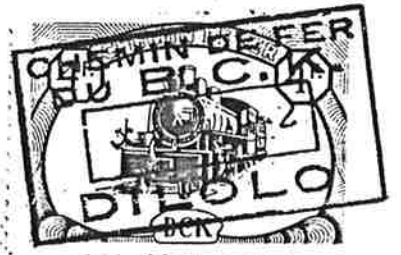
12



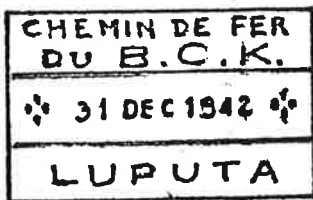
13



14



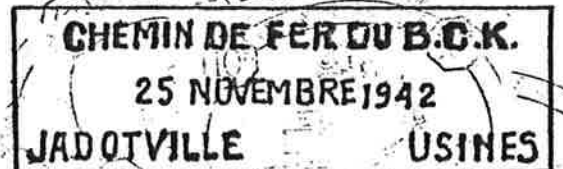
15



16



17



18

- Type 2: CHEMIN DE FER
DU KATANGA
- The initial name was N'TENKE, as shown on older maps and also in the railway guide of 1930 in my possession. The N' was erased from the canceller.
- A) ..TENKE (ex. N'TENKE)
- Type 3: CHEMIN DE FER DU
KATANGA
- A)DA (ex. TSHINSENDA)
B) GA..... (ex. Garage Km...?)
C) KWA..... (ex. KWATEBALA)
D)ORD (ex. KALULE NORD)
E)SHI (ex. MUSHOSHI)
F) TRI..... (ex. TRIANGE MUNAMA?)
G)40 (ex. KILOMETRE 40 ?)
- Type 4: No name of line. Place name repeated top and bottom
Original cancellers probably used during construction period.
- A) BUK..... (ex. BUKAMA)
B) DOM..... (ex. DOMIONGO)
C)LU (ex. TSHIMBULU)
- Type 5: No name of line. Top name completely erased.
- A)GO (ex. BULONGO ?)
- Type 6: CHEMIN DE FER DU B.C.K.
- A) JADOTVILLE MAGASIN
- Type 7: Cie DU CHEMIN DE FER
DU BAS CONGO AU KATANGA
- A) LUPUTA
- Type 8: CHEMIN DE FER
DU BAS CONGO AU KATANGA
- A) MWEKA
- Type 9: B. C. K.
- A) KAKENGE
- Type 10: CHEMIN DE FER DU
B.C.K.
- A) LUBUDI
- Type 11: CHEMIN DE FER DU
B. C. K.
- A) LULUA GARE
- Type 12: CHEMIN DE FER DU
B. C. K.
- A) BUKAMA
B) GARE PORT FRANQUI
C) KAMINA

- D) MWENE DITU
- E) TRANSIT PORT FRANQUI
- F) TSHIMBULU

Type 13: CHEMIN DE FER
DU B.C.K.
A) ELISABETHVILLE DEPART

29% of the cancels are of this type, which is explained by the fact that Elisabethville was the main distribution centre for the railway net.

Type 14: CHEMIN DE FER
DU B: C. K.
A) JADOTVILLE MAGASIN
B) LUENA
C) MUTSHATSHA

Type 15: CHEMIN DE FER
DU B. C. K.

- A) KOLWEZI
- B) DILOLO

Type 16: CHEMIN DE FER
DU B.C.K.

- A) LUPUTA

Type 17: Cie DU CHEMIN DE FER
du Bas Congo
au Katanga

26% of the cancels are of this type, which I believe was used by the train conductors operating mobile railway offices along the line.

- A) ELISABETHVILLE

Type 18: CHEMIN DE FER DU B.C.K.

- A) JADOTVILLE USINES

I have no explanation for the unusual size of this cancel. It should be noted however that all these cancels were not originally intended for cancelling stamps, but for dating transportation forms and official correspondence. In the case of Jadotville Usines, it will have been mainly used for the waybills that accompanied the truckloads (20 to 30T) of copper and other metals shipped abroad. Considering the considerable value of these consignments, it is possible that the authorities wanted the name of the place of origin to appear in bolder lettering on the forms. For some reason or other, this canceller was later in use in the goodsyard (Jadotville Magasin) where it was used for cancelling the stamps on the "Petit Colis" (small parcel) forms.

OMER P. COOREMANS

DIE PROOFS OF THE 1923-27 'VLOORS' ISSUE - NEW LISTINGS

In Bulletin No. 25 dated January, 1976, we were given a listing of the then known proofs derived from two catalogue listings and from those in the collections of two of our members. It was further stated there must be other proofs in existence and members were requested to send in any information they might have available.

Five years have past with no results, but now we have information on the largest known collection of these interesting proofs. At the ARIPEX '81 exhibition, a visiting philatelic judge happened to see this writer's collection on display and requested to know what information he had on these proofs. A few copies of philatelic information from my library brought out the promise of being furnished with photo copies of the judge's collection. This is now available for recording with a total of 24 proofs - 19 without values and 5 with values and are numbered.

At the time of the original writing, it was thought the prefix letter used with the number might indicate a different value, but with this listing, this will prove incorrect as the 40c value has the same number as the 1,25Fr in the collection of R. B. McGarrity.- i.e. A-50538.

<u>Number of proofs</u>	<u>Value</u>	<u>Colours</u>
3	55c	green, brown and dark orange red
3	10c	brown, green and purple
3	15c	purple, brown orange and green
1	20c	blue
3	25c	purple, dark green and brown orange
3	75c	orange, blue and olive
3	1Fr	green, brown orange and brown

With values:

1	30c	green with number 50539
1	40c	violet with number A-50538
1	1Fr	olive with number C-1453
1	3Fr	dark blue with number 50535
1	5Fr	grey blue with number 50536

The owner of this collection informed the writer of his once owning a die proof of the 10Fr, but was sold to a collector for its topical subject matter.

All of the listed die proofs are now for sale. Details will be furnished by writing to the Editor.

R. E. JACQUEMIN

'FILE COPIES' OF WATERLOW & SONS 1910-1918 ISSUES

In Bulletin No. 35 (March, 1980) the writer reported on File Copy sheets of the 1894-1910 Mols issues, salvaged from Waterlow's records.

A further batch of similar sheets has been discovered, these covering 1910-18 issues, and Mr. Robson Lowe has again given the writer the opportunity to inspect them before they are dispersed.

Again, the sequence is incomplete, even less complete than were the earlier File Copies, but there is much that can be learnt from them. As before, each sheet has written in the selvedge the words 'File Copy' (on the 1918 Red Cross issue contracted to 'File'), a Waterlow reference number, a date and the number of stamps printed. Each stamp is punched with a hole, these varying in size from printing to printing.

The printing and values are described in a manner similar to that used in Bulletin No. 35.

THE PRINTINGS204377 (Waterlow Reference No.), 13.12.11

These sheets are punched with $4\frac{1}{2}$ mm diameter holes, two in each stamp.

(1910) 5c, 200,000 (stamps), perf. 14
 10c, 200,000, perf. 14
 15c, 100,000, perf. 14
 50c, 100,000, perf. 14

58127, 20.4.15

The sheets are punched with 10mm. holes, one in each stamp.

(1915) 5c, 300,000, perf. 15
 10c, 300,000, perf. 14
 15c, 300,000, perf. 15
 25c, 300,000, perf. 14
 40c, 200,000, perf. 14
 50c, 100,000, perf. 14
 1fr., 200,000, perf. 15
 5fr., 75,000, perf. 14

58402, 20.8.15

The sheets are punched with 10mm. holes, one per stamp.

(1915) 5c, 300,000, perf. 14
 10c, 300,000, perf. 14
 15c, 300,000, perf. 14
 25c, 300,000, perf. 14
 40c, 200,000, perf. 15

58403, 20.8.15

This is the special printing of the 1915 issue entirely in black, each stamp punched with a 10mm. hole. There is a sheet of each of the eight values, all perforated 15, and the number of each value printed is written in the selvedge as 600.

74005, 28.11.16

39/23.

The sheets are punched with 10mm. holes, one in each stamp.

- (1915) 5c, 300,000, perf. 14
 - 10c, 300,000, perf. 14
 - 15c, 300,000, perf. 14
 - 25c, 300,000, perf. 14
 - 40c, 200,000, perf. 14
 - 50c, 100,000, perf. 14
 - 1fr, 200,000, perf. 14
 - 5fr., 75,000, perf. 14
- but the sheet has the bottom horizontal row of perforations missing.

58572, 27.12.17

This is the 1918 Red Cross issue and, unlike the other File Copies and those of the 1894-1911 printings, the sheets are in fine condition with full gum. Each stamp is punched with a single 6mm. hole. Written in the selvedge of each sheet is 'o/p', presumably referring to the surcharge and red cross, printed in carmine.

- 5c, 500,000, perf. 14
- 10c, 500,000, perf. 14
- 15c, 400,000, perf. 14
- 25c, 300,000, perf. 14
- 40c, 300,000, perf. 14
- 50c, 200,000, perf. 14
- 1fr., 100,000, perf. 14
- 5fr, 30,000, perf. 14
- 10fr, 15,000, perf. 14

120785, 22.1.20

The sheets are punched with 4½mm. holes, two in each stamp.

- (1915) 5c, 500,000, perf. 14
- 10c, 500,000, perf. 14
- 15c, 500,000, perf. 14
- 25c, 500,000, perf. 14

THE VALUES

To approach greater completeness, the two sheets of 1910 stamps included in the 10.10.13 printing and described in the earlier article are included again here.

1910 5 Centimes

The two printings comprise:

- 13.12.11 200,000, Combination of plates IIII+B4
- 10.10.13 350,000, IV+D1
- 550,000

Du Four gave the total number printed, including all overprinted stamps, as 682,000 and this of course from all eight combinations of plates. If the File Copies represent single printings during which neither frame nor centre plate was repaired by retouching or re-entry (there is no way of knowing if this was the case), it suggests that Du Four's figure is grossly low.

1910 10 Centimes

The two printings comprise:

13.12.11 200,000 plates III2+C1 (Du Four III1+C1 but after addition of 'traits de repere')

10.10.13 350,000

550,000

This compares with Du Four's figure of 739,000 for the five combination of plates.

1910 15 Centimes

Only the 13.12.11 printing is represented with 100,000 stamps and the File Copy is from combination of plates III1+A5. Du Four's figure of 623,250 stamps issued is from the eight known combinations of plates.

1910 50 Centimes

Only the 13.12.11 printing is represented with 100,000 stamps and the File Copy is from combination III1+A3 (Du Four III1+B1). Du Four's figure of 523,500 is from the two combinations of plates but the printing from the second, III2+A4, must have been relatively small.

1915 5 Centimes

The printings comprise:

20.4.15	300,000,	plates V1+E (Du Four V+E and before retouching of the plate)
20.8.15	300,000,	V2+E (after addition of 'Traits de repere')
28.11.16	300,000	V3+E (after retouching of frames)
22.1.20	<u>500,000,</u>	VI+F
	1,400,000	

compared with 1,100,000 given by Du Four and the File Copies do not include plates V3+F, used only for the EST AFRICAINE overprints, and there were probably 300,000 in this printing.

1915 10 Centimes

The printings comprise:

20.4.15	300,000,	plates V1+D2 (Du Four V+D2 before adding of "traits de repere")
20.8.15	300,000	V2+D2
28.11.16	300,000	V2+D2
22.1.20	<u>500,000</u>	V2+E (Du Four V+E)
	1,400,000	

compared with Du Four's figure of 1,200,000 and the File Copies do not include plates V2+D3 from which there must have been a substantial printing of maybe 300,000.

1915 15 Centimes

The printings comprise:

20.4.15 300,000, plates III4+B3 (without the hole drilled in the frame plate to prevent extension of the crack on No. 41)

20.8.15	300,000,	III5+C1 (Du Four III5+C)
28.11.16	300,000,	IV1+C1 (Du Four IV1+C)
22.1.20	<u>500,000,</u>	V+C2 (Du Four V+D)
	1,400,000	

compared with Du Four's figure of 500,000 and combinations of plates IV2+C1 and V+C1 are not represented by File Copies. If these last two combinations represented particular printings, the numbers printed would probably have been relatively small, giving a total in all of perhaps 2,000,000, maybe 1,700,000.

1915 25 Centimes

The printings comprise:

20.4.15	300,000,	plates III1+B (Du Four III+B)
20.8.15	300,000,	III1+B
28.11.16	300,000,	III1+C (Du Four III+C before addition of 'traits de repere')
22.1.20	<u>500,000,</u>	III2+D (Du Four III+D)
	1,400,000	

compared with Du Four's figure of 700,000 and there are no File Copies of combinations III2+C (the printing from this combination must have been large) and III3+D (probably a small printing and maybe all used for surcharging '50c' in 1922). The total printing must have approached 2,000,000.

1915 40 Centimes

The printings comprise:

20.4.15	200,000,	plates II+A2
20.8.15	200,000,	II+A3
28.11.16	<u>200,000,</u>	II+A3
	600,000	

compared with Du Four's figure of 700,000.

1915 50 Centimes

The printings comprise:

20.4.15	100,000,	plates III3+A5 (Du Four III2+B3)
28.11.16	<u>100,000,</u>	III3+B (Du Four III2+C)
	200,000	

compared with 350,000 given by Du Four. Judging by the commonness of the stamp, there must have been at least one other substantial printing from the second combination of plates.

1915 1 Franc

The printings comprise:

20.4.15	200,000,	plates III1+A4
28.11.16	<u>200,000,</u>	III1+A7 (Du Four III+B)
	400,000	

compared with Du Four's figure of 375,000. Moreover, plate combinations II2+A5, II3+A5, II4+A5, II5+A5, II6+A5 and II6+A6 are not represented by File Copies. There must have been several more printings;

the commonness of the stamp suggests that far more than 400,000 were printed.

1915 5 Francs.

The printings comprise:

20.4.15	75,000, plates	III+A2
28.11.16	<u>75,000,</u>	III+A3
	150,000	

compared with Du Four's figure of 200,000. There is no File Copy of the combination of plates II2+A3 and there must have been one additional printing.

1918 Red Cross Issue

General Du Four does not, in his book, quote the number of each value issued; the Balasse Catalogue gives figures and for each value from 5 centimes to 1 franc the figure on the File Copy agrees with total of the stamps without and with the A.O. overprint. This suggests that either Waterlow did not apply the A.O. overprint (highly unlikely because Belgium was then occupied by Germany) or the request for overprinting was received by Waterlow after the stamps had been printed.

Balasse states that, of the 5 francs, 15,000 were issued without and 12,500 with A.O. overprint, a total of 27,500 compared with 30,000 written on the File Copy. It seems likely that the two issues, without and with A.O. overprint, were each 15,000.

Of the 10 francs, Balasse gives figures of 10,000 without and 7,500 with A.O. overprint, a total of 17,500 compared with 15,000 on the File Copy. The Red Cross surcharge is normally in carmine, as is that on the File Copy, but, quite rarely, the surcharge is found in vermilion. It may well be that there was an additional printing of 2,500 stamps with the vermilion surcharge.

With the 10 francs stamps the relative horizontal positions of the '10 FR5' and the cross vary slightly from one vertical column to another. The writer has a block of four with the A.O. overprint imperforate. It was possible to position the block in the sheet and it was found that the setting of the surcharge on the block was not the same as that on the sheet. It would appear clear that the imperforate stamps were not printed at the same time as the perforated and that a second overprinting plate had to be made. The Red Cross surcharge on all values of the imperforate stamps is in vermilion and it is possible that the additional printing of the 10fr value was made at the same time.

1915 BOOKLETS

There were amongst the File Copies two complete booklets, one with blue cover and one with yellow, and part of a third booklet with yellow cover.

The complete booklets contain stamps from the 'First Printing' and each cover bears the Waterlow reference number 58257 but, unfortunately, no indication of the number of booklets printed; each stamp in each pane is punctured with a 5mm. hole. Inside one of the booklets was a part-pane of the 5 centimes, from the same 'First Printing' but with the stamps punctured with 9 mm. holes. This suggests that there was more than one actual printing of what we call the 'First Printing'.

The incomplete booklet has no Waterlow reference number on the cover and contains stamps from the 'Third Printing', each being punched with two $4\frac{1}{2}$ mm. holes.

WATERLOW REFERENCE NUMBERS

The sequence of these numbers on the File Copies is even more chaotic than on the File Copies of the earlier issues and it is very difficult to guess what they represent. It is tempting to believe that the numbers of the 20.4.15, 20.8.15 (both issued stamps and black 'proofs') and 27.12.17 printings of the sheets of 50 and the 'First printing' of the booklets are in the same sequence of numbers. This would mean that the booklets were printed between 20.4.15 and 20.8.15. We have no knowledge when the booklets were first issued and, at first sight, 1915 would seem to be likely but, to date, we have not found a booklet stamp with cancellation earlier than 1918, in spite of diligent searching in an effort to ascertain when the booklets were issued. It would seem highly unlikely that the booklets would have been kept in stock for two years before they were issued.

PERFORATIONS

Most of the File Copies are perforated 14 with only four sheets, apart from the stamps printed entirely in black, perforated 15. Overall, this approximates to the scarcity of the 15 perforation on the issued stamps but it is clear that with most individual printings of each value Waterlow used several perforating machines, mostly 14 with perhaps one 15.

GENERAL

In the comments on the numbers printed it is generally presupposed that, for a particular printing of a stamp, the condition of each of the frame and centre plates remained the same and that re-entry, re-touching and replacement of plates happened only in preparation for a new printing. There is no justification for this supposition; indeed, we well know that the centre plate of the 1894 10c brown was completely re-entered during the course of the printing of only 600 sheets. On the other hand, we now know that the frame plate of the 1915 25c. was used to print at least 28,000 sheets - and probably more - without the plate being obviously re-entered or retouched, except by the addition of 'traits de repere'. Having no knowledge of which plates, if any, were of copper, soft steel, hardened steel or nickel or chromium plated, it seems impossible to make any reasonable judgement on the question.

R. H. KEACH

WATERLOW PROOF SHEETS AND 'FILE COPIES'

By the courtesy of Mr. Robson Lowe I have had the opportunity to study part of the Waterlow archives of the post-Mols issues and my notes taken are recorded below.

1925 'Colonial Campaigns'

There is a single perforated File Copy sheet of 100 stamps with each stamp punctured in the usual way but with three holes per stamp. In the selvedge is the reference number 109022, the date 8.6.25, the number of stamps printed 600,000 and ' $\frac{1}{2}$ French $\frac{1}{2}$ Flem'.

The number of stamps printed, 600,000, agrees with the total of Congo and Ruanda stamps as given in the Balasse Catalogue and by General Du Four. It would appear likely that Waterlow overprinted half of the printing RUANDA-URUNDI but there is no proof sheet of the overprinted stamps and the overprint may have been applied elsewhere.

1942 Congo 'War Relief'

There is one imperforate proof sheet and one perforated File Copy of each of the green and blue stamps. The perforated sheets are cut down to normal size (sheets of 50, 10x5) but the proof sheets are as printed with plate numbers and plate setting marks thereon. The setting marks comprise a vertical cross at each corner of the selvedge and in the middle of the top, bottom, left and right selvedges, the crosses, in all directions, being in line; the cross in the centre of the top selvedge has a short vertical line above it; in the middle of the bottom selvedge a vertical line below; to the left of the cross in the middle of the left selvedge is a dot and then a short horizontal line; to the right of the cross in the middle of the right selvedge is a dot and then a line. There are additional plate setting marks set eccentric vertically: a vertical cross between stamps 14,15,24 and 25; a short vertical line at the top between Nos. 4 and 5 and another at the bottom between 44 and 45; a short horizontal line to the left between Nos. 11 and 21 and another in the left selvedge at the same height; a short horizontal line to the right between 20 and 30 and another in the right selvedge at the same height. The plate number is engraved to the short vertical line in the top selvedge. This arrangement of plate setting marks appears to be constant for all single colour stamps of this format at this period, and for the frame plates of bicoloured stamps.

The plate numbers are: green stamp (CONGO BELGE at top) 41475, blue stamp (BELGISCH CONGO at top) 41474.

The green imperforate proof sheet was approved 23.10.41, the blue 22.10.41 and is marked '1000 pulls'. Many minor imperfections on both proof sheets are marked but it would appear that none was corrected before the File Copies were printed.

The green File Copy is marked '29.8.41, File Copy, 182705, 550,000, Design No. 1'. The blue File Copy is marked '12.9.41, File Copy, 182705, 25,000, Design No. 1'. There would appear obvious errors in the markings: the 25,000 printed marked on the blue sheet is not in agreement with the '1000 pulls' marked on the proof sheet and should be 50,000; both File Copies are marked 'Design No. 1' whereas one should have been 'Design No. 2'.

It will be noted that the dates on the File Copies are some six to eight weeks earlier than those on which the proof sheets were approved. The

dates on the file copies cannot, at least in this case, have been when the printing was completed. They may have been the dates when the Waterlow works order was placed for the preparation of the plates and subsequent printing.

The supposed printing of 50,000 of each colour agrees with the figures given in the Balasse Catalogue.

1944 'Message Sheets'

There are imperforate proof sheets of seven of the eight Congo values but none of the four Ruanda Urundi.

These miniature sheets were printed from plates of twelve panes, three wide, four high.

Each proof sheet has marked on it '500 pulls'. This would make a printing of 6,000 of each value, agreeing with the figure in the Balasse Catalogue. The sheet of the 1,25 F, frame only, also has written on it 'print cutting lines at head and foot' and the plate setting crosses (absent on all other proof sheets) in the left margin are crossed out. In the proof sheet of the 1,25 F with both frames and centres, the print cutting lines have been added and the crosses burnished out.

Each sheet, with the exception of the 1,25 F, frames only, has the plate number engraved, and each sheet has, in manuscript, the date approved and a reference number. These are as follows:

<u>Value</u>	<u>Plate No.</u>	<u>Approved</u>	<u>Reference No.</u>
30 c	42533	17.7.44	XL 56813
50 c	42406	25.2.44	XL 56583
60 c	42269	9.11.43	XL 132490
75 c Frame only	42530	13.7.44	XL 56813
Complete	42531 (centre plate)	14.7.44	XL 56813
1,25 F Frame only	(no number)	12.7.44	XL 56813
Complete	42529 (frame plate)	12.7.44	XL 56813
	42531 (centre plate)		
1,75 F	42270	6.12.43	XL 132490
2,50 F (Flemish on top)	42407	23.2.44	XL 56583

There was no proof sheet of the 2,50 F with French on top, nor of any of the four Ruanda values.

The dates and reference numbers suggest that there were three successive orders for these miniature sheets, the first, reference 132490 covering the 60 c and 1,75 F, the second 56583 for the 50 c and 2,50 F (Flemish on top) and the third for the other three values, reference 56813.

(Writer's note: I am studying vast numbers of proof sheets and file copies of the various printings of the 1942 issues, Congo and Ruanda, and the 1943 postage dues. Eventually there will be an extensive report on the issues covering not only the various plates used for each value and their markings but also the major plate varieties where they are noted. A copy of the report will go into the Study Circle archives and will be available to anyone interested. At the present time, as opposed to the Mols, these stamps are considered of very limited interest and members may very well consider that the use of valuable space in the Bulletin would be quite unjustified for publishing the information, even in abbreviated form. Members' views on this matter will be appreciated by the Editor.)

R. H. KEACH

PLATING THE FIRST 10 F MOLS.

Although for many stamps we cannot add something valuable to Mr. Jonckheere's book, we have found enough other varieties which may be very helpful to those who wish to plate this difficult value. Anyway, the English translation and Mr. Vindevoghel's excellent designs will be welcome.

A circle around the number of the stamp in the sheet means that the left upper triangle is not retouched.

A square around the same number: the two thick horizontal lines under left 10 are joined in one thick green line.

All the varieties are not indicated in our drawings and the sign ? signifies that the variety described in the previous line is not always present.

- No 1: No retouch in top left triangle. Thick white line under left 10: Balasse variety No. 4.
- 2: No retouch in top left triangle. Slight doubling in 1 of right hand 10.
- 3: Two green dots always visible in left margin next to the left frame line; a third one at midheight more to the left. ? One green dot in thick vertical white line to left of bottom serif of left 1. Black oblique scratch in bottom margin, under O of left hand 10. ?
- 4: No retouch in the top left triangle. Top frame line protruding at left. Right frame line somewhat thicker at the top. Vertical black guide-line through the centre, at left of chimney (also visible but not so clearly, in No. 3, 5, 36, 39, 42) Green speck in right margin, against right frame line, at the height of the white bottom circle. ?
- 5: No retouch in the left top triangle. Oblique frame line doubled at top left. Green dot on the first horizontal line, 1,5 mm to the right of the top left corner. Two horizontal bottom frame lines protruding in left margin. Oblique black scratch in bottom margin under D of Du ? Another black horizontal scratch a little above the preceding one, normally in the frame ?
- 6: Heavy traces of green colour above top left corner. The oblique frame line in the same top left corner does not reach the triangle.
- 7: Extension into the margin of the diagonal line in the bottom left corner.
- 8: Top frame line weak above EN of INDEPENDANT.
- 9: Green dots in the lower part of last O of CONGO. Long curved black scratch normally against the bottom left corner. ? Nearly vertical black line in the lower half of the left margin.
- 10: No retouch in the top left triangle. Lines depicting the water are faint under the sternwheeler: Balasse variety No. 1 Green dots in A of ETAT, in first O and G of CONGO ?

- 11: At left, the second top frame line is not parallel to the first one. Left frame line very thin at top.
- 12: Green dot in the bottom margin under the centre small circle ? Two green parallel oblique scratches in the centre under U of DU ? Nearly vertical black scratch 2mm to the right of the prow in the centre.
- 13: Green dot in right margin against the right frame line. Top frame line faint in its right part, especially the last cm. Two nearly vertical black scratches in the right margin, one extending to the scratch of No. 9.
- 14: Top frame line protruding in the right margin (as in No. 15, 39, 40, 46). Short curved scratch in O of right figure 10. Two black little horizontal lines at mid-height, in the right margin. ? Nearly vertical black scratch in the right margin.
- 15: Top frame line protruding in the right margin. Top right triangle retouched (unique). Oblique burin scratch between the two top frame lines, above PE of INDEPENDANT.
- 16: Horizontal top frame lines above A of ETAT not parallel. Several horizontal green lines are protruding in the lower left margin, especially the 6th line counted from the bottom. Two oblique black scratches under S of FRANCS, in the bottom margin.
- 17: Two short horizontal green scratches in the bottom margin, the second under the N of FRANCS. One little curved black scratch in the top frame lines, normally above G of CONGO. ?
- 18: Doubling of the right bottom corner (as in 43). Top frame line descending at left.
- 19: In the bottom left corner, the oblique line does not reach the outer frame corner and the 3rd horizontal green line (counted from below) is protruding in the left margin.
- 20: Oblique lines protruding in the bottom margin, at left and at right (as in No. 28, 29, 36), with an oblique dotted line protruding under N of FRANCS. Black diagonal scratch at the bottom of the right margin.
- 21: Bottom left corner open. Two diagonal black scratches in top margin, above CONGO. Top left corner with oblique line incomplete.
- 22: Top right corner protruding obliquely, slightly. Third top frame line thicker above first T of ETAT. Retouch in top left triangle: 9 neat horizontal green lines.
- 23: Second top frame line thick to the left and above INDEPEN. One short horizontal black scratch, one oblique black scratch and several black little dots normally in right margin, against bottom right corner ?
- 24: Oblique lines protruding at right bottom corner (as in No. 26, 33, 38). Second top frame line doubled above AN of INDEPENDANT
- 25: No retouch in the top left triangle. Short thick white line under the left hand white circle (as in 43).

- 26: Oblique lines all protruding above in the left top triangle. Oblique lines protruding in the right bottom corner. Oblique burin line between top frame lines 1 and 3 above AN of INDEPENDANT.
- 27: Horizontal green line protruding in left margin 1 mm above E of ETAT. Retouch of right bottom corner protruding slightly.
- 28: Top frame line doubled above DEPEN. Oblique lines protruding in the bottom margin, at left and at right. Burin line between top frame lines 2 and 3 above 2nd N of INDEPENDANT. Oblique burin line in top margin, above GO of CONGO.
- 29: Second and third top frame lines thick above NT DU C. Oblique lines protruding in the bottom margin, at left and right. Black curved line in centre 3 mm to left of chimney.
- 30: Second top frame line doubled above ON of CONGO. Two horizontal black lines (1,5 mm apart) in right margin, at middle-height.
- 31: Bottom frame line neatly protruding in right margin (as in No. 44). All top frame lines retouched and thick to the left. Second top frame line retouched and thick to the right.
- 32: Three oblique green lines protruding above out of the top left triangle. Burin curved line above the top right corner.
- 33: Burin line between top frame lines 3 and 4 above P of INDEPENDANT. Oblique lines protruding in the bottom margin, on the right.
- 34: Top left corner retouched (unique). Top right corner doubled, with Congo doubled. Balasse variety No. 5.
- 35: "Eau blanche" more pronounced than in No. 10 - Balasse variety No. 1. Retouch in the top left triangle with crossed lines (unique).
- 36: Bottom frame line is protruding at left. Oblique lines are protruding in the bottom margin to left and to right. Burin line in the top right corner between top frame lines 1 and 2, and another burin line above, in the top margin.
- 37: The 2nd top frame line is not parallel to the 1st, especially above I of INDEPENDANT; also burin line just above that I between top frame lines 2 and 3. Retouch in bottom left corner where two oblique green lines are protruding in O of the left hand 10.
- 38: Retouch in the top left triangle with descending lines (unique) Oblique lines are protruding in the bottom margin and in the right margin in the right bottom corner.
- 39: The top frame line is neatly protruding to the left and slightly into the right margin. Two horizontal green lines retouched and forming one thick line under the left hand 10. Green dot in centre, 4 mm under the last N of INDEPENDANT.
- 40: The top frame line is protruding in the right margin. Retouch above the left hand white circle in the bottom left corner with 2 thick horizontal green lines.

- 41: Doubling of the left part (unique) - Balasse variety No. 6. The 3rd top frame line is protruding in the right margin.
- 42: Several green specks in the top margin, to the left and above C of CONGO. Left and right outer frame lines protruding in the top margin.
- 43: Doubling of bottom right corner. Lower line of arch above G of CONGO doubled. Top frame line doubled in the top margin above INDE. White spot under left hand 10, as in No. 25. Burin line in the top right corner between top frame lines 3 and 4.
- 44: One thick green line under the left hand 10. Bottom frame line protruding in the right margin. Burin line in the top margin above DE of INDEPENDANT.
- 45: Burin lines in the top margin above P of INDEPENDANT and N of CONGO. 3rd top frame line very faint in the top right corner. Green dot in the right margin a little under midheight ?
- 46: The top frame line is protruding slightly in the right margin. Oblique burin line in top margin above 3rd N of INDEPENDANT. One thick green line under the left hand 10.
- 47: One thick green line under the left hand 10. Doubling of 3rd top frame line above DEPEN. Oblique green scratch in centre under the wheel of the boat (not in Princes).
- 48: The bottom frame line is not horizontal but curved at the left end. Several green scratches in top margin, to the right. Faint horizontal lines in the bottom left corner.
- 49: The bottom left corner is open - the horizontal short lines are very faint. Several green scratches in the top margin, to the left and to the right. One thick green line under the left hand 10.
- 50: Two green scratches in the top margin, to the left. Two vertical green guide-lines in the right margin and two horizontal ones crossing them against the bottom right corner ?

M. A. VINDEGOGHEL, ABBE G. GUDENKAUF
AND R. H. KEACH

10 fr ETAT INDEPENDANT

①	②	③	④	⑤
6	7	8	9	⑩
11	12	13	14	15
16	17	18	19	20
21	22	23	24	25
26	27	28	29	30
31	32	33	34	35
36	37	38	39	40
41	42	43	44	45
46	47	48	49	50

○ = triangle supérieur gauche non retouché.

□ = ligne sous 10 de gauche épaisse.

THE CANCELLATIONS OF THE NORMAL POST OFFICES OF BELGIAN CONGO
AND RUANDA URUNDI

ADDENDA AND CORRIGENDA NO. 14

Corrections to Addenda and Corrigenda No. 13 (with further apologies
of RHK)

In 'Alterations to Angular Measurements' LEUBO should be LUEBO.

In 'Changes to Dates' LUDZI should be LUOZI; SONGOLOLO Dmyt/t should be Dmyt *29-31; STANLEYVILLE 12B(E)1- was incorrect and should be replaced by STANLEYVILLE 1 12B(E)1- *53-8; TSHIKAPA F7C1- *26-9,24-5,44-7 should be *26-9,34-5,44-7.

Further Alterations

BILI 8A2- angles to be 63 156 181 246 270. KAMPENE 8A2- angles to be 143 192 224 289 322. LODJA 8A1-Dmyt/t should be 8A1-Dmyt/y. Change LOMELA 8A1- to 8A1-Dmyt. Change KITEGA 8A1- to 8A1-Dmyt and years to *37-41,45.

Additional Cancellations

BANZYVILLE 8A1-Dmyt/t (date) 42. BOMA 1.12-DMtY 22. COQUILHAVILLE 1.2-MDTY 06. ELISABETHVILLE 1.1-tMDY 11. IBEMBO 1.2-TMDY 02. INONGO 1.1-MDtY (no date). JADOTVILLE 1 MCl-tDmY 57. KAFAKUMBA 1.1-tMDY 17. KAMINA 1 MD1-tDmy 59. KINGOMA 8A1- (angles) 134 199 218 282 302 (date) *59. LEOPOLDVILLE 1.8-MDTY (no date). LISALA 1.1-MDtY 21. LISALA 7A1-Dmyt 29. LOMELA 8A1-Dmyt/y (no date). LUKAFU 1.2-MDtY *12. LUKULA 1.1-DtMY/t 09. LULUABOURG 1.1- (angles) 195 311 (date) 14. MATADI 1.6-DMTY 06. NOUVELLE-ANVERS 1.2-DMTY 08. SAKANIA 1.1-DMtY 11. SHABUNDA 8A1-Dmyt/t 40. STANLEYVILLE 6 12B(A)1- (no date). THYSVILLE 1.2-tDMY/y (no date). TSHELA 8A3- (angles) 98 180 202 264 285 (date) *60. TSHOFA 11(A)1- *60. TSHOFA 11(B)1- *58-60. YANGAMBI 1 11(E)1- *60. ZOBIA 11(A)1- *60. KITEGA 8A1-Dmy 46-7.

Changes to Dates

ABA 5E1-Dmyt *21-7. ALBERTVILLE 7A2- *30-5; 12B(E)1- 55-6,60; 12B(F)1- *54-6. ALBERTVILLE 3 12B(A)1- *59-60; 12B(B)1- *59-60. ARU 8E1- *52-60. AVAKUBI 1.1-MDTY *09. BAFWASENDE 8A3- *56-60. BAGIRA 11(A)1- *57-60. BAMBESA 10(B)- *54-9. BAMBILI 1.1-DMtY *12-4. BANANA 1.3-DMTY *86-99; 1.6-DMTY *00-2. BANNINGVILLE 12A1- *55-60; 12B(A)1- *56-60. BANZYVILLE 12B(A)1- *55-6,60. BASANKUSU 1.1-MDtY *06-10. BASOKO 1.1-DMTY *96-8; 1.2-DMTY *00-2; 1.3-DMTY *00-2; 1.3-DMtY *05-15. BAUDOUINVILLE 12A1- *53-60. BEFALE 8A3- *55-60. BILI 8A2 *57-9. BOENDE 1.1-DMtY *13-4; 11(G)1- *59. BOMA 1.8-DMTY 07. BONDO 10(A)- *54-9. BUKAMA 1.1-tMDY 16. BUKAVU 1 10(-L)- *55-9. BULUNGU 7A1- *25-34; 7C1- #35-7,54-60; 8A1- 38,42-4,54-60. BUMBA 11(A)1- *59-60; 11(B)1- *59-60; 11(D)1- *59-60. BUNYAKIRI 8A1- *59-60. DIMBELENGE 10(A)1 *59-60. DJALASIGA 8A1- *53-60. ELISABETHA 11(A)1- *55-60. ELISABETHVILLE 12B(H)1- *53-8; 12B(L)1- *53-60. ELISABETHVILLE 1 MCl-DmYt *59-60. ELISABETHVILLE 2 12C2- *53-9. ETOILE DU CONGO 1.1-DMtY *13-5. GANDAJIKA 10(A)- *55-60. GOMA 1 11(A)1- 58-60. GOMA 2 11(A)1- *59-60; 11(B)1- *59-60. GOMBE 4.1-DMtY *17-25. IDIOFA 8A1-Dmyt/y *46. IKELA 8A3- *49-59; 11(B)1- *56-9. INGA 10(-A)- *59-60. IREBU 8A2- *48-59. IRUMU 1.1-tDMY *14-9; 10(-C.)- 51,59. KABALO 10(-B.)- *52-6,60. KABINDA 11(C)1- *53-60. KAFAKUMBA 1.1- DMtY *13.17-8. KAMBOVE 11(A)1- *58-60. KAMINA-BASE MILITAIRE 1 14B(D)1- *59-60. KAMPENE 8A2 57-60. KASINDI 1.1-DMtY *12-4. KIAMBI 1.1-tDMY *15-22. KIKWIT 8A3- *48-56. KIKWIT 1 10(A)- *58-9; 10(D)- *58-

60; 10(E)- *59. KILWA 8A1- *59-60. KINDU 1 10(D)- *60; 10(F)- *60.
 KINDU 2 10(A)- *59-60. KISENGE 11(A)1- *56-60. KOLWEZI 10(D)- *54-
 8. KOLWEZI 1 MBL-DmYt *57-60. KONGOLO 1.1-tDMY 15-6,20-1; 11(A)1-
 *55,59-60; 11(B)1- *55-60; 11(BCH)1- *58-60. KUNGU 11(A)1- 56-9;
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 LEOPOLDVILLE 1.2-DMTY *91-8; 1.5-DMtY *02-3,11; 1.7-DMtY *03-5;
 1.11-tDMY *22-3; 8A4- *42-5. LEOPOLDVILLE 1 10(K)- *49,53; 12B(I)1-
 *54-60; 13A(.B.)- *58-60. LEOPOLDVILLE 7 12B(A)1- *57-60. LEOPOLD-
 VILLE 9 12A1- *60. LEOPOLDVILLE-AEROGARE 14B(C)1- *53-6,60. LEO-
 POLDVILLE-KALINA 15A- *57-60. LIBENGE *A3- *47-50,55-60. LIKASI
 1.1-tDMY *18-25; 7A1- *30-1; 7A4 31. LIKATI 8A2- *58-60. LISALA
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 8A3- *59-60. LOWA 8A2- *57-60. LUALI 1.3-DMTY *00,05-10. LUBERO
 8A1- *37-45. LUEBO 8A3- *48-54,58-60. LUISA 8A2- *49-54,59-60;
 11(A)1- *56-8. LUKAFU 1.1-DMty *08-11. LUKUNGU F1.1-DMTY *96-8.
 LULINGU 11(A)1- *59-60. LULUABOURG 1 12B(C)1- *53-60; 12B(G)1- *59-
 60; 12B(K)1- *56-60. LULUABOURG 2 12A1- *58-60. LUOZI 8A1- *50-5,
 59. LUPUTA 10(A)- *49-53,60. LUSAMBO *1.1-DMTY *00-10; 1.1-TDMY/T
 *08; 11(A)1- *59; 11(D)1- *55-60. MADIMBA 1.1-tDMY *14-24. MAHAGI
 8A1-Dmyt/t *40-3; 8A3- *57-60. MANGAI 11(A)1- *59-60. MANONO 11(C)1-
 *59. MASI-MANIMBA 10(.A.)- *58-60. MATADI 1.4-DMtY *06-7,11-3;
 1.5-tDMY *13-22; 1.7-DMTY 08-9; 1.7-tDMY 13-22; 5D2-Dmyt *21-6.
 MATADI 1 10(.C.)- *52-3,58-60; 10(.F.)- 52-3,59-60. MINOVA 8A1 *59-
 60. MONKOTO 8E1- *54-60. MUNGBERE 8A1- *59-60. MWENA-DITU 8A3-
 *53-4,58-60. MWESO 10(-A)- *59-60. NIANGARA 1.1-DtMY *12,18. NIEMBA
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 *50-3, 57-60. NOUVELLE-ANVERS 1.2-tDMY 17-9; 12A1- *53-4,59. PAULIS
 1 10(A)- *58-60. POKO 8A1-Dmyt/t *42-3. PONTHERVILLE 12A1- *53-60.
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 *55-60. PUNIA 8A2- *50-5,59-60; 8A3- 54-6,60. PWETO 1.1-MDtY *03,
 13,22; 8A2- *58-9. RUTSHURU 8E1- *55-60. SAKANIA 1.2-DMtY *13-9;
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