# "Passenger Rooks": New First Move Economy Records 

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## Birds' Opening ${ }^{456}$

Passenger pigeons used to throng the skies - but here we study a different bird: the passenger rook. ${ }^{7}$
A flock of retro problems asks solvers to prove the first move of a particular piece in a position. Let's begin with a very simple one, for those unfamiliar:

[^0]
## Tutorial ${ }^{8}$

J.M.Ott, A.Buchanan


8/1P6/2P5/PP1B4/kBP5/P2N4/P1K5/1N6
$(12+1)$ First move of wPa 3 ?
(To find this in PDB, the online chess problem database, search at https://pdb.dieschwalbe.de for probid='P1383249'.)

Black has no possible last move, so it must have been White, who has made 15 pawn captures. No retraction of a non-capturing move by Wh gives Bl a legal move prior to that, and the only capture that can be undone at this point is a 3 xXb 3 . What was X ? The only value which gives Bl a legal prior move is R. (E.g. bQb3-a3? implies an impossible check). This last move in the game happens in this example (this is not always the case) to be the first move of wP now on a3, so we have solved the problem:

## Retract: 1. b2xRa3 Rb3-(x)a3.

We refer to the task addressed by this problem as: "Type A PxR". "Type A" means we are not told who has the move, and there is no check in the diagram. This type has been the main focus historically for First Move problems. Some of the easier cases of "Type C" (a check in the diagram) have also been tackled. "PxR" is hopefully obvious, but note that we don't have separate tasks for separate original pieces e.g. $\mathrm{wPa}, \mathrm{wPb}$ etc.

So how many Type A tasks are there?

Chess has 6 species of piece, and 7 kinds of move to be shown ("never moved", "move without capture", 5 x "capture particular species"). Promoted pieces are considered to be born anew, so one can ask, for each of the 4 species of promoted piece, for the 7 kinds of move. There are also 4 special moves normally included in such tasks (double pawn hop, $0-0,0-0-0$, and e.p.). This gives $(6+4) \times 7+4=74$ candidates. However, all knight moves and all but two rook moves seemed impossible to force as first moves, and e.p. is clearly not a first move for the capturing pawn. This

[^1]left 74-7-5-1 = 61 achievable tasks. Three of Bernd Schwarzkopf's problems combine multiple simple tasks, so the 61 tasks are exhibited for Type A in 55 compositions. At https://pdb.dieschwalbe.de you can type the search string k='type a' and k='econ:first'.

Compositions are rated under the usual priority list for such economy problems:
(1) minimize number of units, then
(2) minimize number of officers, then
(3) minimize number of major officers, then
(4) minimize number of queens.

Problems still equal after these criteria have been applied are considered to be ex-aequo. Use of non-standard material is not regarded as a defect in these challenges.

This field was first explored in 1981 by Bernd Schwarzkopf ${ }^{9}$, although a few earlier last-movers were found to be record-holders in the first-move space as well. This triggered a widespread burst of ingenious activity in 1983-1984, with Michel Caillaud ${ }^{10}$ proving the real master of this subgenre. Then the field went quiet, with only occasional improvements. Werner Keym collected together all the existing problems ${ }^{11}$ in his book Eigenartige Schachprobleme, in 2010, which provoked Gerd Wilts to resolve the final hold-out (KxS) in time for the book's addendum. In 2019, Andrew Buchanan published a set of 10 corrections and improvements, by him and others. ${ }^{12}$ And now...

## Andrey Frolkin's idea

## The difficulty

Any game can be prefixed by a little dance e.g. 1. Sa3 Sa6 2. Rb1 Sb8 3. Ra1 Sa6 4. Sb1 Sb8 which specifically gives one rook a move without capturing. Unless that rook castles (or 50 move rule or draw by repetition apply), this jig will have no impact on the subsequent game. So it seems impossible to prove a specific capture by a rook (e.g. "RxB"), or even that the rook has not moved at all ("R0"). The case where rook moves without capture ("R-") had been solved efficiently a long ago by Schwarzkopf and friends (P0007812). The dead position rule had been used to exhibit R0 (P1272393). But for the other 5 cases, there seemed no hope. ${ }^{13}$

## The cunning trick

Castling is defined in the FIDE rules as a king move. So we claim that a castled rook has not yet made its first move! It was just a passenger in the castling. So if there is a position where we can retract a rook move and then uncastle it before it could unmove again, we have solved the challenge. Easy as fowling off a lark! It turns out that all Rx Type A \& Type C cases can be handled in this way, as well as a more economical Type A R0. ${ }^{14}$ The following table shows the number of White+Black=Total pieces in the records. New rook records in this article are indicated in bold.

[^2]|  | Type A | Type C |
| :--- | :--- | :--- |
| R0 | $\mathbf{1 0 + 3}=\mathbf{1 3}$ | $3+1=4$ |
| R- | $10+1=11$ | $\mathbf{1 0 + 1}=\mathbf{1 1}$ |
| RxP | $\mathbf{1 4 + 1 2}=\mathbf{2 6}$ | $\mathbf{1 6 + 6}=\mathbf{2 2}$ |
| RxS | $\mathbf{1 4 + 1 0}=\mathbf{2 4}$ | $\mathbf{1 2 + 8}=\mathbf{2 0}$ |
| RxB | $\mathbf{1 4 + 9}=\mathbf{2 3}$ | $\mathbf{1 0 + 8}=\mathbf{1 8}$ |
| RxR | $\mathbf{1 3 + 1 2}=\mathbf{2 5}$ | $\mathbf{1 3 + 8}=\mathbf{2 1}$ |
| RxQ | $\mathbf{1 1 + 1 4 = 2 5}$ | $\mathbf{1 6 + 8}=\mathbf{2 4}$ |

## Type A records

## Type A: R0



8/P1p5/PN6/1P6/P1N5/Pk6/pP6/2KR4
Oskar E. Vinje
The Fairy Chess Review 1938
$(10+3)$ Last move?
Deemed stipulation: "First move of wRd1?"
PDB: probid='P0001468'

Wh moved last, and R: 1. 0-0-0 is the only way to avoid immediate retro stalemate: i.e. to ensure that Bl had some prior move. Since castling is a king move, we can truly claim that $w R$ has never moved! Layering Andrey's trick on this classic old problem allows us to supersede the previous record P1272393. Well done, Oskar!

This shows the concept of deemed stipulation at work. It is part of the award of the economy record, not the problem itself. This idea of deeming can be applied to respectfully repurpose other older problems, that we want to celebrate as accidental record holders for more recent themes.

It can also help to resolve awkward precedence questions cleanly. E.g. Høeg 1923 P0001056 and Pavlovic 1950 (not in PDB) both had wKb7, wBc8, bKd7, with differing stipulations: "Last move?" vs "First move by bishop?" Well, now for economy record purposes only, we deem that Høeg also asked "First move of wBc8?"

## Type A: R-

Bernd Schwarzkopf, Wolfgang Dittmann, Godehard Murkisch
feenschach 1981
$(10+1)$ First move of $w R g 1$ ?
PDB: probid='P0007812'

This would just be a reprint of a problem with no passengers, so we won't include it here. However, the Type C: R-shown later provides a very big hint.

## Type A: RxP



5b1n/1p2prBP/P2PrRQb/p2pk1pR/7p/3PP3/1P2B1PP/6K1(14+12)
First move of wRf6?
PDB: probid=' ${ }^{\prime} 1382903^{\prime}$

We will give a detailed explanation of this one, as it shows many ideas that occur in the later problems. So the first general step is to look at the missing pieces and definite promotions:

- Wh lost SS, no promotions.
- Bl lost QBSP, promotion to B.

Now we figure out the pawn captures as much as we can:

- Wh pawns: cxd, fxgxh - one missing Bl piece unaccounted for. By parity, this last Bl piece wasn't captured by a pawn. So in particular wPa6 never captured.
- Bl pawns: axSb6xSa5, c=B. So Wh captured cxd6, not cxd3, as bPd5 never captured.

There is a "cage" in the top right corner of the board. What was the last piece to move into that big clump? It can't have been wPd6, because on c-file it would block bPc7 from promoting on c1. It can't have been wQ, because in coming from e4 or f5 it would have been delivering an illegal check. It can't have been bK , because if it fled from $4^{\text {th }}$ rank, the prior Wh move was $\mathrm{d} 2-\mathrm{d} 3+$ or e2e3+. In the former case it blocks wQB's start square, in the latter case it blocks wKR's start square, if wKB returns to f 1 . The other pieces are easier to check. The only candidate which remains is
wRf6, but in coming to that square, it must have captured a Bl unit already there, or we have another ill-eagle ${ }^{15}$ check. Well, that accounts for the last missing Bl unit!

But now what? That B1 unit can't have entered f6 recently, because it could have only done so in response to a Wh check. The clock is ticking: there are only two Bl moves that can be retracted. No other Bl pieces can be uncaptured, as they were captured inside the cage.

So we can teal that this wRf6 is wKR. If we can retract it to g 1 or h 1 , and retract $w B$ to $f 1$, then bK can retract to d 4 or f 4 , with e2-e3+ as the locking move. wK is in the way, and the only way we can remove the dithering buffoon quickly enough is for Wh to uncastle. The retractions therefore look like this:

Retract: 1. $\underline{\text { Rf1xXf6 }} \mathbf{b 6 x S a 5} 2 . \underline{0-0}$ a7xSb6 3. Bf1-e2 Kd4(f4)-e5 4. e2-e3+.
Now what was X, the Bl unit captured on f6? Well, ask what happened to [bfP]. It didn't capture. And since castling happened later, it did not promote. So we say that [bfP] was waylaid as a pawn on f6 after an uneventful life.

There's a family of tries that we need to exclude, whereby a free Wh piece might go to retract to f6 to release the Bl pinned unit there: R: 1. Rf2xSf6? b6xSa5 2. Sb3-a5 a7xSb6 3. Sc5-b3 [retropat] 4. Se4-c5 Se8-f6 5. Sf6-e4+. Or suppose it was the wR which returns there, e.g.: R: 1. Rf2xSf6? Sd7f6 Rf6-f2+ now there is no way that the cage can ever be unlocked. And the other original wR is also confined there ("a bird in a gilded cage"), and so cannot be uncaptured e.g. on a5.

So the only solution is the intended one: $\mathbf{R x P}$ was the rook's first move after its journey as a passenger in wK's sidecar.

## Type A: RxS



3bRBB1/2ppBQRp/3ppRBb/6kB/6p1/1p3BP1/4P2P/6K1
$(14+10)$ First move of wRf6?

[^3]The basic matrix here is the same, but the details are different.
Missing pieces and definite promotions?

- Wh lost SS, promotions to RBBBB.
- Bl lost QRRBSS, promotion to B.

Pawn captures?

- Wh pawns: $\mathrm{axb}=\mathrm{R}, \mathrm{bxa}=\mathrm{B}, \mathrm{cxb}=\mathrm{B}, \mathrm{dxe}=\mathrm{B}, \mathrm{fxe} / \mathrm{g}=\mathrm{B}$ or similar. In any case at least 5 pawn captures are required, leaving one Bl unit unaccounted for. Note that in the case of f 2 xg 3 , gxf=B, etc., Wh could only have 2 light-squared (Zanzibar red) bishops, but there are 3 on the board.
- Bl pawns: exSd6, fxSe6, a=B.

Again the only possibility is that the jailbird wRf6 is wKR, and can uncapture to retreat to h1 via uncastling, in order to beat the race condition and unlock the cage:

## Retract: 1. Bg2-f3 b4-b3 2. Rf1xXf6 b5-b4 3. 0-0 b6-b5 4. Bf1-g2 K?4-g5 5. g2-g3+.

What was X ? It can't have been bQ or bR, because the castling would have been illegal. It can't have been bB (on account of wrong square colour) or bP as the $8^{\text {th }}$ pawn promoted to an obtrusive one still on the board. Thus by elimination it is bS.
wR promoted on b 8 , so there is no problem about bPb6 blocking in a promoted unit. One may wonder if it's safe to have wBh5. In fact, R: 1. Bb1xSg6 Se5-g6 2. Bg6-h5+ still leaves the cage intact, as there is no spare Bl piece to capture, because $2 . \ldots \mathrm{Kh} 5-\mathrm{g} 53 . \mathrm{Bc} 2-\mathrm{g} 6+$ ? is illegal owing to $w$ Qf7 already attacking bK.

Type A: RxB

k1B2RQ1/Pp1pp1p1/rpB3N1/pN1P4/8/4p2P/2P1P1BP/6K1
(14+9) First move of wRf8?
PDB: probid=' P1382906'

Bl captures: c7xb6, fxe, and has captured: wR, wqB.
Wh promotions: $\mathrm{c} 8=\mathrm{B}, \mathrm{f} 7 \mathrm{xg} 8 / \mathrm{e} 8=\mathrm{B}$; Wh captures: 5 by pawns (axb, bxa, bxc>c8=B, f7xg8/e8=B, g 2 xPh 3 ); the original Bl Bs were both captured at home.
To release the small cage in the NW corner, $\mathrm{c} 7-\mathrm{c} 8=\mathrm{B}$ and $\mathrm{c} 6-\mathrm{c} 7$ are needed, to be followed by c7xb6.
An attempt to unpromote Bc6 or Bg2 fails: 1. d4-d5/Bf3-g2 e4-e3 2. Bd5-c6/Bh5-f3 e5-e4 3. Bf7-d5/Sf4-g6 e6-e5 4. Be8-f7/Be8=h5 ??
Unpromoting Bc 8 also fails on account of one missing tempo. Immediate $\mathrm{c} 7-\mathrm{c} 8=\mathrm{B}$ ? results in illegal check from wRf8: 1. Rf2xBf8 e4-e3 2. c7-c8=B e5-e4 3. d4-d5 e6-e5 4. Bd5-c6 ??
This can be regarded as the main plan. The thematic uncapture of the bishop on f8 eliminates the obstacle - illegal check (this time from Qg 8 ) and so it is part of the preliminary plan.

Retract:1. Rf1xBf8! e4-e3 2. 0-0 e5-e4 3. Bf1-g2 e6-e5 4. g2xPh3 h4-h3-8 unique last single moves, then 5. d4-d5 (S~-b5 is also possible) h5-h4 6. B~-c6 h6-h5 7. c7-c8=B h7-h6 8. c6-c7 c7xBb6 9. B~-b6.
One more capture is unique: $\mathrm{f} 7 \mathrm{xRg} 8=\mathrm{B}$.
Type A: RxR


B2BBBnB/2ppBqRn/3ppRBb/6kp/6p1/6P1/2p1P2P/6K1
(13+12) First move of wRf6?
PDB: probid=' P1382907'
Missing pieces and definite promotions?

- Wh lost QSS, promotions to BBBBB.
- Bl lost RRBP, no visible promotions.

Pawn captures? At least 3 captures are necessary to promote all the Wh pawns: cxb>b8=B, $\mathrm{dxe}>\mathrm{e} 8=\mathrm{B}, \mathrm{axb}=\mathrm{B}$ (or [bPa] was waylaid). The coloring of squares occupied by Wh Bs indicates that there were an even number of Wh P captures. If there were 4 pawn captures, then Wh cannot uncapture Rxf6 or Bxg6, so the cage can never be unlocked. So it can only be 2 Wh pawn captures: [baP] is indeed waylaid to clear the path for [waP] to promote on a8, leaving just one missing B1 unit unaccounted for. Pawn captures:

- Wh pawns: $a=B, b=B, c x b=B, d x e=B, f=B$.
- Bl pawns: bxc, exd6, fxe6, a| (waylaid on a-file, and never promoted).

Bl pawn can't uncapture bxc recently, because [wbP] promoted on b8. So the clock is bPc2 unmoving to c6. The cage can only be released in the usual way. Bxg6 would not allow for the return of wkR to its "box" on $\mathrm{g} 1 / \mathrm{h} 1$ : it can only be Rxf6. The unit uncaptured on f6 can only be bR.

Retract: 1. Rf1xRf6 (as free as a bird) c3-c2 2. Bf3-a8 c4-c3 3. 0-0 c5-c4 4. Bg2-f3 c6-c5 5. Bf1g2 K?4-g5 6. g2-g3+.

The move sequence is more complicated than in the previous cases because wB must shield the uncastling against bR.

Type A: RxQ


3BBn2/2pRBrPn/3pQRrb/3pp1kp/2p3p1/6P1/2p1P2P/6K1
(11+14) First move of wRf6?
PDB: probid=' P1382908'
Missing pieces and definite promotions?

- Wh lost SSPPP, promotion to B.
- Bl lost QB, no promotions.

Pawn captures?

- Wh pawns: $\mathrm{a}=$ =?, $\mathrm{b}=\mathrm{B}, \mathrm{c}|, \mathrm{d}|$, fxg. At least 1 pawn capture is required (gxf), leaving one Bl unit unaccounted for.
- Bl pawns: axbxc, bxc, exd, fxe.

The retraction of f 2 xg 3 would mean two captures by wPg 7 - one too many. And so, parroting the positions above, the move releasing the cage is $\mathrm{g} 2-\mathrm{g} 3$. It has to be preceded by return of wKR to $\mathrm{g} 1 / \mathrm{h} 1$ and of wB to f 1 . But the bishop is yet to be uncaptured. As to the rook it is unclear at this point whether it should also be uncaptured. Bl can retract one of its c-pawns to the a-file, e.g. $\mathrm{a} 4 \times \mathrm{Rb} 3 \times \mathrm{xc} 2$, thus necessitating wPaxb for promotion on b8. The other Bl c-pawn cannot be retracted to the b -file, for that would prevent wPb from promoting on b 8 . In this scenario, however, no Wh promotion to light-squared bishop is possible.

This means that the cage can only be released in the usual way. The unit uncaptured on f6 can only be bQ, at which point Bl exclaimed: "MacQueen's bustard!"

Retract: 1. Rf1xQf6 flying the coop b3xBc2 2. Be4-c2 b4-b3 3. Bf3-e4 b5-b4 4. 0-0 c5-c4 5. Bg2f3 c6-c5 6. Bf1-g2 K~4-g5 7. g2-g3+. Here, the Bl pawn moves can be ordered in several ways.

As in the previous case, wB must shield the uncastling. In this composition, wPg 7 is ok, with no fear of retraction to f6, because there are only two missing Bl units, and one is the light bishop. $\mathrm{bPd} 5 \& \mathrm{bKg} 5$ stop any wS from retracting to f 6 .


## Type C records

Only 10 out of potentially 61 of the Type C "First Move" records were ever completed, and most of those are very simple. In PDB, search for: $k=$ 'type $c^{\prime}$ and $k=' e c o n: f i r s t ' ~$

The field is unlikely to be as interesting as Type A, because the check can be so strong to force a simplistic record. However, the keen ornithologist can spot passenger rooks lurking here too. In principle, there is a fundamental choice which does not exist for last-movers: "Which side do we want to have delivering the check?" but in practice, all known examples ask about the first move of the piece which moved to check or discovered check.

## Type C: R0

Before discussing new compositions, let's first recognize that the Type C: R0 task is trivially satisfied by two existing problems (ex-aequo). You can easily figure out what the diagrams must be, (except for the bK's exact position).

Branco Pavlovic
Sahovski Vjesnik 1950

[^4](3+1) First move of K?
Deemed stipulation: "First move of R?"

PDB: probid='P0001103' or probid='P0001104'
Type C: R-


Alas no passengers here, but this diagram indicates the level of economy that any passenger record would need to better. Note that in this problem the check is not delivered by a rook (cf. the Type C RxR record below). Moreover, the last move is not unique - any Bl piece can be uncaptured on d3.

## Type C: RxP



3N4/ppp4P/4NBpB/5BQp/4P1BR/R3QRk1/3PP3/6K1
(16+6) First move of Rf3?

Missing pieces and definite promotions?

- Wh lost nothing, promoted to QRBB
- Bl lost QRRBBSSPPP, no promotions

Wh pawns captured axbxcxd, bxcxd, cxd, fxe, gxh \& hxg - all promotions on d8 except for Bg8. This accounts for 9 Bl units; the $10^{\text {th }}$ was captured through Rxf3\#. This was the only capture on the f file, and the missing [bfP] never itself captured, so, as we will see later, Wh's last move was RxPf3\#. The last B1 move was not g7-g6 - because [whP] captured on g7, prior to B1 h7-h5 \& [wgP] capture on h6. This means that Bl's last move was X~-f3. Before that, Wh checked Bl king(fisher). Qxe3+ or Bf3xg4+ would amount to an inexplicable 11 ${ }^{\text {th }}$ capture. Only f3xe4+ maintains the Bl balance. But this closes the f-file, ruling out promotion of Bl f-pawn. Therefore Bl's last move was f4-f3, so wR did not come from f4. As just shown, Wh's prior move was f3xe4+, and it must again have been bP captured, as no other capture took place on e-file. The castling can be delayed, but in the end must happen to avoid retropat. Bl pawns are limited in retraction because of the need to allow promoted Bs to escape from d8 \& g8.

## Retract: 1. Rf1xPf3\#! f4-f3 2. f3xPe4+ e5-e4 3. $\underline{\text { 0-0 Kg2-g3 }}$

or extended, e.g.: 3. Sf8-e6 e6-e5 4. Bc3-f5 f5-f4 5. Be7-f6 f6-f5 6. 0-0 Kg2-g3

## Type C: RxS



N7/p1p5/8/8/8/PP6/qrPPPPPP/nNkR2K1
$(12+6)$ First move of wRd1?
PDB: probid=' P1382911'
With bK lurking behind this pawn configuration, there can have been no Wh pawn cross-capture, and b 3 must have been played before a 3 . So bR could not have penetrated the wall. Wh has 4 missing pieces unaccounted for ( $\mathrm{QRB}+\mathrm{Bf} 1$ died at home), so at most one Bl promotion took place - this was bRb 2 , following two captures by $\mathrm{bPb} / \mathrm{d}$ and leaving 1 Wh unit missing in action. The last move was $1 . \mathrm{RxSd} 1+$. But which square did the rook come from?

R: 1. Re1xSd1+ Sc/e3-d1 2. Rf1xd1+? but no Bl piece to capture.
R: 1. Rf1xSd1+ Sc/e3xQ/Rd1 2. Q/Re1xd1+? but no Bl piece to capture.
So by elimination:
R: 1. Rf1xSd1+ Sc/e3-d1 and the only possible out is $2.0-0+$, so Bl S came from c3.

## Retract: 1. Rf1xSd1+ Sc3-d1 2. 0-0+

## Type C: RxB



R4R1k/1p1pp1pP/6pp/3N4/8/6pP/4P1BP/3B2K1
$(10+8)$ First move of wRf8?
PDB: probid=' P1382912'

Bl balance: $8+6$ (fxg, g6xh7, g2xh3) $+3(\mathrm{dxexf}, \mathrm{f} 7 \mathrm{xg} 8 / \mathrm{e} 8=\mathrm{B})+2(\mathrm{Bc} 8, \mathrm{Bf} 8)=16$.
Wh balance: $10+6(c 7 x d 6 x e 5 x f 4 x g 3, f 7 x g 6, a x b>b 1)=16$.

Retract: 1. Rf1xBf8+ f4xg3 2. $\underline{0-0} \mathbf{e} \mathbf{~ 5 x f 4 ~ 3 . ~ B f 1 - g 2 ~ d 6 x e 5 ~ 4 . ~ g 2 x h 3 ; ~ l a t e r ~ B d 1 > g 8 , ~ f 7 x e / g 8 = B , ~}$ e6xf7/f6-f7, f7xg6. Wh promotes on a8, c8 \& e8/g8, B1 promotes on b1.

Type C: RxR


## 8/1p5p/8/5PP1/3PNkpB/2PPb2q/P1pPPpQ1/3N2K1

(13+8) First move of wKR?
PDB: probid=' P1382913'

Q: Why can't we see the bird?
A: Because it's in "da skies" (disguise)!

Missing pieces and definite promotions?

- Wh lost RRB, no promotions.
- Bl lost RRBSSPPP, no promotions.

Last move: g3xRf2+ (not g3xBf2+ because of wrong square colour); before that, Rf1xXf2+. At this point, Bl can only retract XxRf2 - b3xc2 or h5xg4 would mean one capture too many by B1. The Wh bishop was captured on g-file. Thus all Wh pieces are accounted for. Wh pawns made 6 captures, one B 1 piece was captured on f 2 ; the bPa was waylaid.

## Retract: 1... g3xRf2+ 2. Rf1xRf2+ Rf3xRf2 3. $\underline{0-0}$ Qh2-h3

If 2. Rf1xSf2+ Sh1xRf2, the second wR delivers illegal check.

## Type C: RxQ ${ }^{19}$



8/4p1p1/1Bp5/6PP/5PRQ/1P1P1k1p/PBPrNRN1/n1nB2K1
(16+8) First move of Rf2?
PDB: probid=' P1382914'

Missing pieces and definite promotions?

- Wh lost nothing, promotion to B.

Bl lost QRBBPPPP, no promotions, because...

If $\mathrm{f} 7>\mathrm{f} 1=\mathrm{B}: 5$ captures by Wh pawns: $\mathrm{hxgxh}, \mathrm{fxe}(\mathrm{g}) \mathrm{xf} 4, \operatorname{exd}>\mathrm{d} 8=\mathrm{B}$

[^5]Bl balance: 8 (pieces on the board) +5 (the above captures by Wh pawns) +1 (Rxf2\#) +1 (Bf8) +2 (waylaid pawns on the a- and b-files) $=17$, impossible.

If d7>d1=B: at least 5 captures by the Wh pawns d...h: dxc/exb/d>b/d8>, e2xd3, hxgxh. Bl balance: $8+5+1$ (Rxf2\#) $+1($ Bf8 $)+2$ (waylaid pawns) $=17$, again impossible.

So actually: Wh's promotion to $B$ requires 1 capture (exPd>d8), and $c 7$ must be open for escape. Wh pawns also captured two officers hxgxh to allow bPh3; bBf8 was captured at home; 3 Bl pawns ( $\mathrm{a}, \mathrm{b}, \mathrm{f}$ ) were waylaid; the eighth capture is Rf1xXf2. This was preceded by $\mathrm{X} \sim-\mathrm{f} 2$. X can only be Q , not R,P (retropat) B,S (unavailable).

## Retract: 1. Rf1xQf2\# Qg3-f2+ 2. Bf2xPb6+ b7-b6 3. $\underline{0-0} \mathbf{Q h 2 - g 3}$

The only way: $1 .$. Qe1-f2+? makes Bl retropat inevitable after 2. Bf2xPb6+b7-b6.


## Envoi

Most chess compositions, even very nice ones, are not records. We would like our passengers to disembark with a RxQ problem which is not a record, but in our view has artistic merit because the uncastling in its solution is a waiting retraction (AKA 'retrotempo move'). So take a gander at this:

[^6]
## Unusual Retrotempo Move



8/4p2p/6P1/5PrB/5pbb/1PPPkRRN/1PPr2Pr/2BQ2Kn $(15+10)$ First move of wRf3?
PDB: probid=' $\mathrm{P} 1382915{ }^{\prime}$

Missing pieces and definite promotions?

- Wh lost S.
- Bl lost QSPPPP, at least one promoted R .

Wh pawns made 4 captures; one Bl piece was captured through Rxf3+; and bPf was waylaid. The missing wS was captured through gxf4; bPa was promoted on al; at this point it seems that bPd could also promote. If 1. Rf2xXf3+, retropat for Bl.
 promotion on $d 1$ and hence proves that $X \neq B / R=Q)$ 2... S $\sim \mathbf{f} 2$ 3. $\mathbf{S f} \mathbf{2}(\mathbf{g 1})-h 3$.


Some passenger rooks in their natural habitat. ${ }^{22}$

## Appendix - First Move records

Record holders for First Move tasks are listed at https://www.dieschwalbe.de/firstmoverecords.htm

Werner Keym wrote in 2010 that the First Move task is little known, and that probably some records can be improved. Ten years later despite many improvements, surely some non-passenger Type A treasures still remain to be unearthed? Even the humble first problem in the article improves on a previous economy record.

A large number of empty Type C slots also beckon. But maybe the passenger rook problems are the most interesting positions of this class? Some of the unclaimed low-hanging fruit are very low indeed, nearly windfalls. A Type A position can often be extended to a Type C position simply by pushing one pawn forward to give check, as in the R- case above. This cheap ploy is not available, for obvious reasons, for Last Move problems, but for First Movers, it can put a lid on the size (and therefore interest) of any record position.

On the other hand, Type B is virgin territory, so is not shown. By default, any Type A record is a candidate for Type B, but can be bettered in some cases. For example Jan Mortensen's pleasantly asymmetric pair P0001043 \& P0001046 can be deemed to show Type B R0, via the passenger mechanism, with only 7 units each. Or his P0001045 deemed to offer Type B P--, with only 5 units. Compare Theophilus WillCocks' excellent and necessarily bulkier Type A P--, P0000996.

[^7]
## That's owl, folks!

Harrier like that? Hoot have thought it? What a lark! Our sincere egrets for all the puns ${ }^{23}$. At some points this article reads like Finnegans Wake ${ }^{24}$ (of vultures) Island Rail. After owl is sedge wren and dunnock, and as the retrograde passenger rooks unflap homewards to their roosts, we bid them farewowl until nest time (if we ever dodo a seagull) ${ }^{25}$ :
"My fate cannot be mastered; it can only be collaborated with and thereby, to some extent, directed. Nor am I the captain of my soul; I am only its noisiest passenger."

Aldous Huxley ${ }^{26}$


## Corrections 23-Dec-2020

Apologies for a few errors, including 2 actual cooks, which crept in to the first version of this article. They are now fixed. Except where noted, they are also errors in the German language version 306-1 Die Schwalbe XII/2020, pp.735742, to be addressed through the magazine's normal Errata procedure.

| Location(s) | Change | Notes |
| :--- | :--- | :--- |
| Type A R- <br> \& Type C R- | Corrected the stipulation to "First <br> move of wRg1". | Typos |
| Type C RxB | Clarified retro move sequence <br> from "f7xg8" backwards. | Minor. Promo square can be e8 or g8, as gxRh7 might capture <br> the caged bR. |
| Type C RxQ | Repaired a cooked problem. | Cook spotted by H.Juel. |
| Type A UR- | Replaced with an entirely <br> different new problem \& solution <br> (Type A BxT). Included footnote. | Earlier problem was cooked and anticipated. Like its <br> anticipator P1108954, it fails to better Ott's Type C UR- <br> (P0000616). (Out of scope for German version of this article.) |

[^8]
[^0]:    ${ }^{1}$ This word is partridge-ularly approp-rhea-te, since noted composer Chris Feather's works include: "Broodings",
    "Hatchings" \& "Moultings". See: http://kobulchess.com/en/composers/worldwide-composers/38-chris-feather.html
    ${ }^{2}$ Rook, (Corvus frugilegus, Saatkrähe) © 2011 Tony Hisgett according to Attribution 2.0 Generic (CC BY 2.0), see https://creativecommons.org/licenses/by/2.0/
    ${ }^{3}$ Albino of Corvus frugilegus © 2018 Mark Hope according to Attribution-NonCommercial-NoDerivs 2.0 Generic (CC BY-NC-ND 2.0), see https://creativecommons.org/licenses/by-nc-nd/2.0/
    ${ }^{4}$ 1. f4 was the favourite first move of Henry Edward Bird for 40 years from 1855.
    ${ }^{5}$ It terns out that one of us bird-brained authors is already guilty of fowl play. See: http://bulletin.chessproblems.ca/pdf/cpb-16.pdf page 758 MR-3 "Retro Rebus Rookery".
    ${ }^{6}$ Chess retrograde analysis writer Raymond Smullyan also eggs-plored logical ornithology in To Mock a Mockingbird and Other Logic Puzzles: Including an Amazing Adventure in Combinatory Logic, Raymond Smullyan, 1985, Knopf, ISBN 0-19-280142-2.
    ${ }^{7}$ According to Wikipedia, https://en.m.wikipedia.org/wiki/Rook (bird), rooks are intelligent birds with an ability to solve simple problems. So perhaps they can tackle retrograde analysis too?

[^1]:    ${ }^{8}$ The first English article version included an entirely different problem, found to be cooked.

[^2]:    ${ }^{9}$ feenschach 55, 07/1981
    ${ }^{10}$ feenschach 70, 08/1984 A richly merited success because "Caille" = French for a quail
    ${ }^{11}$ Eigenartige Schachprobleme, Werner Keym, 2010, Nightrider Press, ISBN 978-3-935586-12-2
    ${ }^{12}$ Retro Mailing List, 03/10/2019
    ${ }^{13}$ The phrase "castles in the air" means "unrealistic hopes". It could also be a cryptic crossword definition of "rooks".
    ${ }^{14}$ As a record, P1272393 is now dead as a dodo.

[^3]:    ${ }^{15}$ As sick as a parrot

[^4]:    ${ }^{16}$ Eagle owl (Bubo bubo, Uhu) © 2016 Thomas Brand.
    ${ }^{17}$ Red Kite (Milvus milvus, Rotmilan) © 2016 Thomas Brand.
    ${ }^{18}$ https://en.chessbase.com/post/swedish-cheboxing-sensation-in-london

[^5]:    ${ }^{19}$ Corrected 23-Dec-2020: bPd7->c6, wSb2->B

[^6]:    ${ }^{20}$ Fischer's sparrow-lark (Eremopterix leucopareia, Braunscheitellerche) © 2008 F.Veronesi according to Creative Commons Attribution-Share Alike 2.0 Generic (CC-BY-SA 2.0), see https://creativecommons.org/licenses/bysa/2.0/deed.en
    ${ }^{21}$ Black Bishop (Euplectes gierowii, Bischofs-Wida / Bischofsweber) © 2005 Aviceda according to Creative Commons Attribution-Share Alike 3.0 Unported (CC-BY-SA 3.0), see https://creativecommons.org/licenses/by-sa/3.0/deed.en

[^7]:    ${ }^{22}$ © 2020 Andrew Buchanan

[^8]:    ${ }^{23}$ Those who need even more wordplay may enjoy Trevor Tao's "Bad Chess Puns" Facebook Group.
    ${ }^{24}$ A notoriously opaque experimental work by famous Irish writer James's flamingo Joyce.
    ${ }^{25}$ We hope this is not the swansong for this set of tasks.
    ${ }^{26}$ This responds to the lines: "I am the master of my fate: I am the captain of my soul." in the famous poem Invictus by William Ernest Henley. Henley was the inspiration for the famous one-legged pirate antagonist Long John Silver in Robert Louis Stevenson's Treasure Island. His equally fictional parrot, Captain Flint, would cry "Pieces of Eight", presumably referring to pawns. So it all fits together!
    ${ }^{27}$ Mute swan (Cygnus Olor, Höckerschwan), © Yerpo 2009, Aviceda according to Creative Commons Attribution-Share Alike 3.0 Unported (CC-BY-SA 3.0), see https://creativecommons.org/licenses/by-sa/3.0/deed.en
    ${ }^{28}$ Black swan (Cygnus atratus, Trauerschwan) Wikimedia Commons 2009 (Fir0002/Flagstaffotos), CC BY-NC.

