

Kākāriki Karaka Recovery Monthly Status Report: July 2022

Reporting Period: 30/6/2022 – 31/7/2022

Recovery Programme Status: How are we tracking to our goal “Preventing Extinction”?

Overall:

- The population in the South Branch Hurunui appears to be experiencing a severe decline and will likely require more intensive monitoring and protection to persist under the current conditions. A valley-wide survey is planned for September, and feeder photos are being reviewed to maximise the accuracy and precision of population estimates.
- There is still a significant vulnerability to this population for rapid decline during mast events – a priority for 2022 was determining the next sites to establish new populations. For the 22/23 season this will be re-establishing a population in the Hawdon Valley.
- The establishment of a new population at Brook Sanctuary is continuing to look positive.
- COVID response continues to create uncertainty regarding translocations/releases, as well as day to day management of the species in the wild and captivity. Contingency plans are in place and Rangers have been trained to support captive operations if required.
- There is a Critical Issue regarding how to sustain progress (and ideally momentum) in the programme once J4N funding ends. This needs to be a focus for the Governance Group in 2022.

Milestones from this month

Milestone

- Generally quiet time of the year for field and office teams.
- Trapping team focusing on cat trapping in the Hawdon and South Branch Hurunui.
- Monitoring team analysing feeder photos and preparing the Hawdon release sites.
- 32 wild nests were confirmed last season: 10 in South Branch Hurunui (7 successful, 3 unknown outcome), 12 Brook (6 successful, 2 unknown outcome, 4 failed) and 10 on Blumine (1 successful, 7 unknown outcome, 2 failed)
- Large mixed flocks (31 birds seen in one flock) of unbanded and banded kākāriki karaka have been seen in the Brook Sanctuary.
- Birds are still breeding at Issacs and Orana Park which will mean possible releases planned for the end of September/start of October 2022.
- RFID bands were attached to six chicks at TICWT, and monitoring is ongoing.
- Meeting 15/7/2022 between Kea and OFK team to talk about available transmitter channels, different options were discussed and there are hopefully enough channels for everyone. A formalized spread sheet of available channels will be made.

Project Issues (new actions bold and italicised)

Critical Issues	Priority	Action Required	Owner	Date First Raised
How to ensure that work is not being compromised by access constraints, including elevated river levels and restrictions imposed by adjacent leaseholders?		Build relationships and understandings with Mt White, Eskhead and Lake Taylor stations to establish greater security of access.	Director ESI	28/10/2020 <i>Still a live issue, access restrictive for some valleys</i>
How to ensure that COVID responses, such as Traffic Light Setting changes and interregional travel restrictions, do not impact translocations?		Support travel required to enable translocation as required.	Director ESI	5/11/2021 <i>No current issue</i>
How to bring post-graduate research students on board to support addressing data deficiencies for Orange-fronted parakeets?		Continued research into existing knowledge gaps to be supported by J4N positions that need to be recruited asap.	Director ESI	29/6/2022 <i>Progress being made, issue on track for resolution.</i>
<i>How to sustain progress made and momentum in the programme gained during J4N funding boost?</i>		Need to determine funding path going forward to maintain baseline recovery programme actions and continue species' recovery.	Director ESI	1/6/2022 <i>Governance Group discussion and action required on this.</i>
<i>How to confirm, understand and manage the apparent significant decline in the South Branch population?</i>		Need to determine whether population is declining, by how much, why, and what management actions can be initiated to reverse decline.	Director ESI	29/06/2022 <i>Governance Group discussion and action required on this.</i>
<i>How to ensure sufficient VHF bands are available for OFP use in North Canterbury releases in 22/23 and on an ongoing basis?</i>		Determine best course of action for tracking kākāriki karaka following releases in 22/23, with only 24 frequencies available due to kea research. This will limit our ability to understand release outcomes.	Director Bio	29/06/2022 <i>Recovery Group members to recommend appropriate way forward to Recovery Group Leader</i> 15/7/2022 <i>Meeting between Kea and OFK representatives to talk about available channels. A formalized spread sheet of available channels for Arthur's Pass will be made.</i>

Actions for GG Consideration (updates bold and italicised)

Team	Issue	Context	Recommended Actions	Risk of not proceeding	Status
Eastern South Island	<i>How to sustain progress made and momentum in the programme gained during J4N funding boost?</i>	<p>Significant progress has been made by new kākāriki karaka Ops team, but resource for this will end in June 2024.</p> <p>There is significant concern that gains and momentum will be lost, and the species recovery will go backwards if this team is not adequately resourced.</p>	Develop a plan for adequate resourcing of the Kākāriki Karaka Operations Team beyond June 2024	<ol style="list-style-type: none"> 1. Species recovery momentum lost. 2. Number and size of wild populations declines. 3. Translocations to new sites will not be possible. 4. Species goes extinct. 	Awaiting Governance Group discussion (next meeting scheduled for 2 August 2022).

OPERATIONS REPORT

Population situation (includes captive and wild sites)

SITE	Situation
ORUAWAIRUA/BLUMINE ISLAND	<ul style="list-style-type: none"> • Approximately 81 birds (based on survey conducted in August 2020) <ul style="list-style-type: none"> ○ Survey planned (August 2022)
BROOK WAIMĀRAMA SANCTUARY	<ul style="list-style-type: none"> • Approximately 93 (85-101) birds (based on mark-resight analysis in Fig. 1) <ul style="list-style-type: none"> ○ Population estimate includes approximate number of unbanded birds
HAWDON VALLEY	<ul style="list-style-type: none"> • Likely no birds <ul style="list-style-type: none"> ○ Surveys undertaken in 2021/22 have not detected kākāriki karaka.
POULTER VALLEY	<ul style="list-style-type: none"> • Likely no birds <ul style="list-style-type: none"> ○ Surveys undertaken in 2021/22 have not detected kākāriki karaka.
SOUTH BRANCH HURUNUI	<ul style="list-style-type: none"> • Approximately 96 (80-112) birds (based on mark-resight analysis in Fig. 2) <ul style="list-style-type: none"> ○ Population appears to have undergone a severe decline
NORTH BRANCH HURUNUI	<ul style="list-style-type: none"> • At least 2 birds (based on 2021/22 searches) <ul style="list-style-type: none"> ○ 3 localised OFP sightings (2 sightings of a male OFP and 1 of a female OFP) recorded over two days in July 2021
ISAACS CONSERVATION & WILDLIFE TRUST	<ul style="list-style-type: none"> • 20 adults, 7 chicks <ul style="list-style-type: none"> ○ 10 breeding pairs. ○ 2 pairs have hatched 1 chick and 6 chicks. ○ 2 pairs not breeding, have swapped aviaries and birds around to see what happens.

	<ul style="list-style-type: none"> o 1 non-breeding pair has been released
ORANA WILDLIFE PARK	<ul style="list-style-type: none"> • 10 adults <ul style="list-style-type: none"> o 1 older pair (on display) o 2 pairs breeding o 2.2 birds for flock mating
AUCKLAND ZOO	<ul style="list-style-type: none"> • 5 adults <ul style="list-style-type: none"> o 1 breeding pair, 1 non-breeding pair, 1 single male
MT BRUCE	<ul style="list-style-type: none"> • 2 adults <ul style="list-style-type: none"> o 1 pair on display
POPULATION ESTIMATES	<p>Current Population Estimate</p> <ul style="list-style-type: none"> • Captive ≈ 44 (37 adults and 7 chicks) • Wild ≈ 272 • Total ≈ 316 birds (including chicks in captivity) <p>Previous Population Estimates</p> <ul style="list-style-type: none"> • 2021/22 ≈ 303 birds • 2020/21 ≈ 351 birds • 2019/20 ≈ 304 birds • 2018/19 ≈ 180-230 birds (pending revision)

Released under the OIA

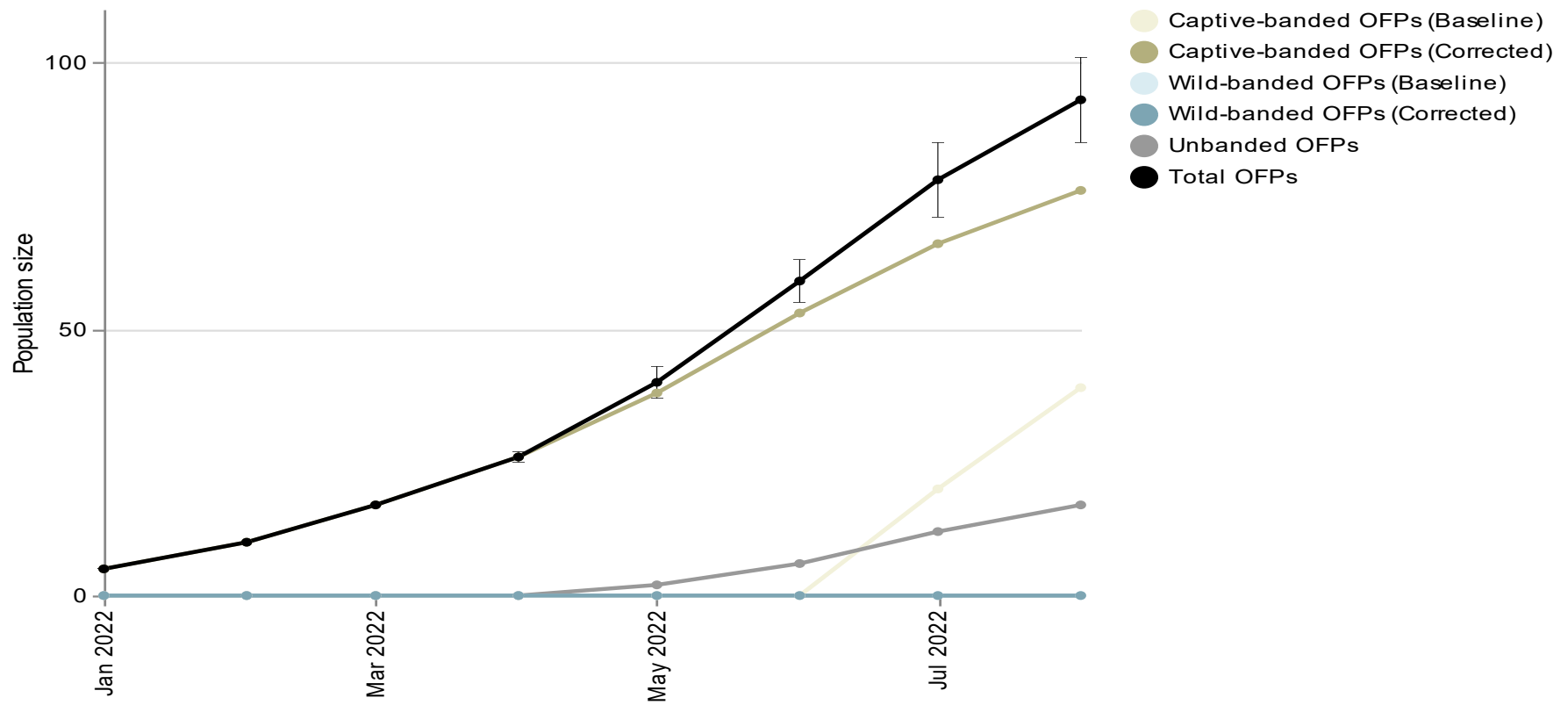


Fig. 1: Rolling population estimate for OFPs in the Brook Sanctuary, based on mark-resight survey data collected in the six months leading up to each date. Error bars represent 95% confidence intervals. The analysis includes a 2-month pre-survey period to determine the baseline number of banded birds present. The impact of releasing birds in the wild is only fully realised in surveys that commenced after the date of their release. An interim correction factor has been applied to account for this.

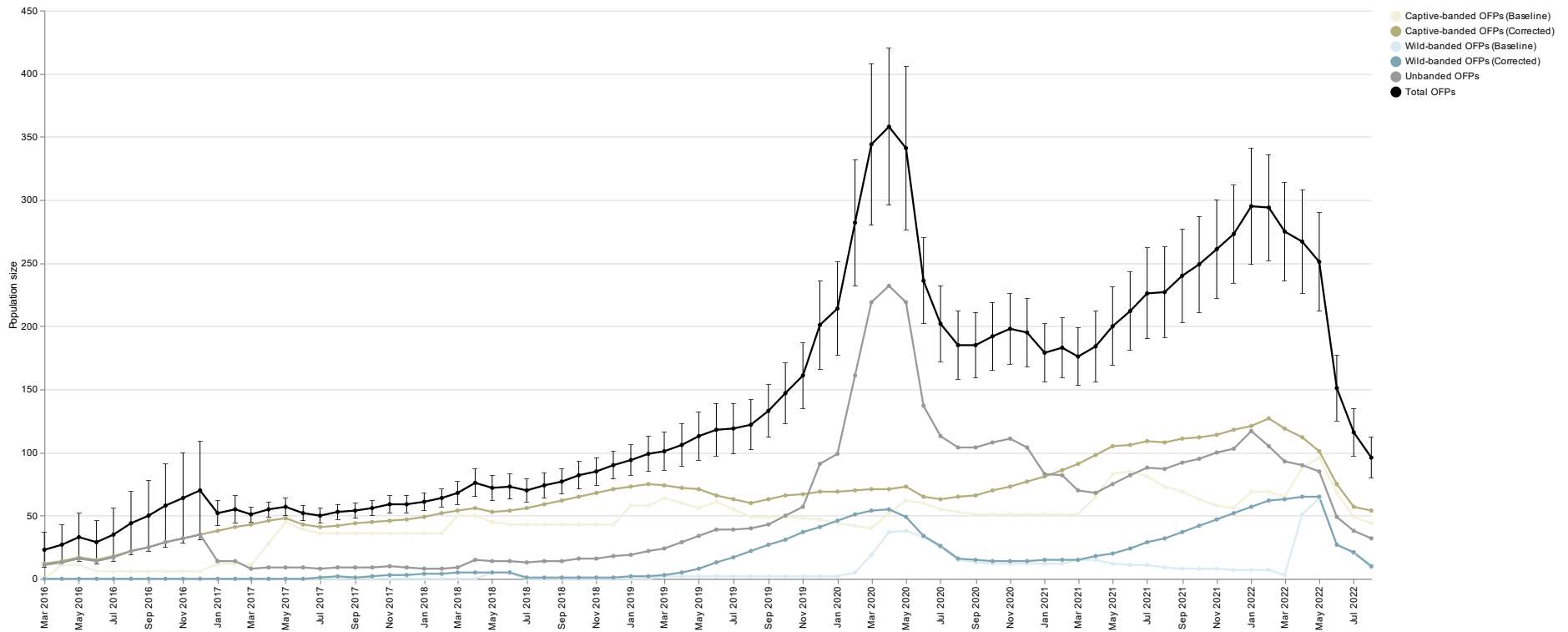


Fig. 2: Rolling population estimate for OFPs in the South Branch of the Hurunui, based on mark-resight survey data collected in the year leading up to each date. Error bars represent 95% confidence intervals. The analysis includes a 2-month pre-survey period to determine the baseline number of banded birds present. The impact of releasing birds in the wild is only fully realised in surveys that commenced after the date of their release. An interim correction factor has been applied to account for this.

Trapping Update

Table. 1: Total pests caught in DOC150, DOC200, DOC250 and cat traps. This represents all predators caught in traps the Hawdon, Andrews, Poulter and South Branch Hurunui valleys.

Month	Cat	Ferret	Hedgehog	Mouse	Rat	Stoat	Weasel	Other	Total pests
Jul-21	0	0	2	0	41	1	0	2	46
Sep-21	1	1	3	1	231	7	2	0	246
Oct-21	0	0	0	27	262	13	3	3	308
Nov-21	1	1	1	3	118	5	0	4	133
Dec-21	0	0	8	45	80	8	5	2	148
Jan-22	4	1	33	16	425	61	8	7	555
Feb-22	3	0	3	24	195	17	10	0	252
Mar-22	1	0	20	4	99	13	3	0	140
Apr-22	0	0	2	2	2	0	0	0	6
May-22	7	0	12	6	85	13	10	0	133
Jun-22	0	0	4	6	21	1	2	0	34
Jul-22	4	0	0	0	2	0	0	0	6
Total	21	3	88	134	1561	139	43	18	2004

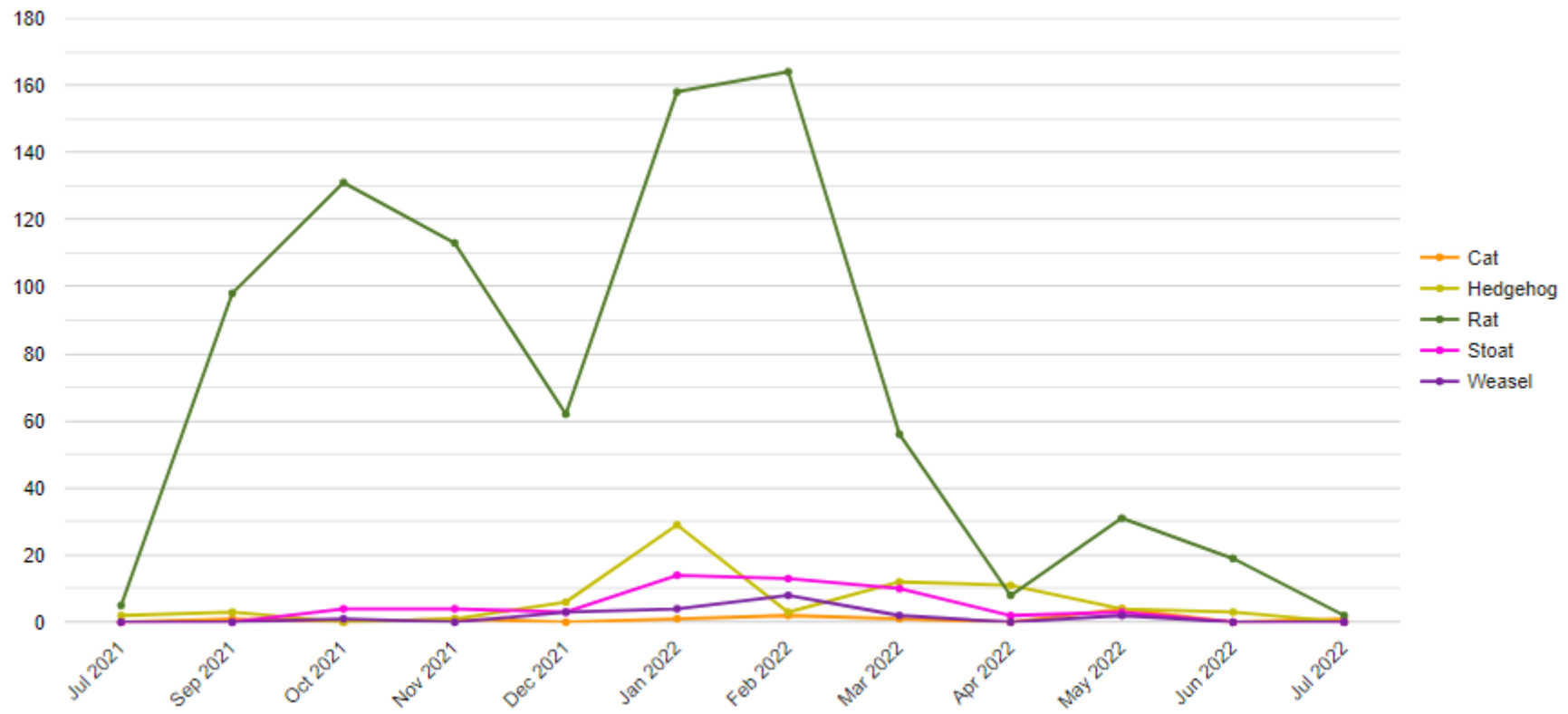


Figure 3. Monthly total for predators caught in the Hawdon Valley. Note traps we not checked in July and August this is due to capacity and weather conditions. Of note post-1080 operations rats are still caught; this is along the front faces and may represent a significant area for re-invasion. Of note for July HikingNZ and the OFK team have not been checking the traps as regularly, due to winter conditions and HikingNZ contract.

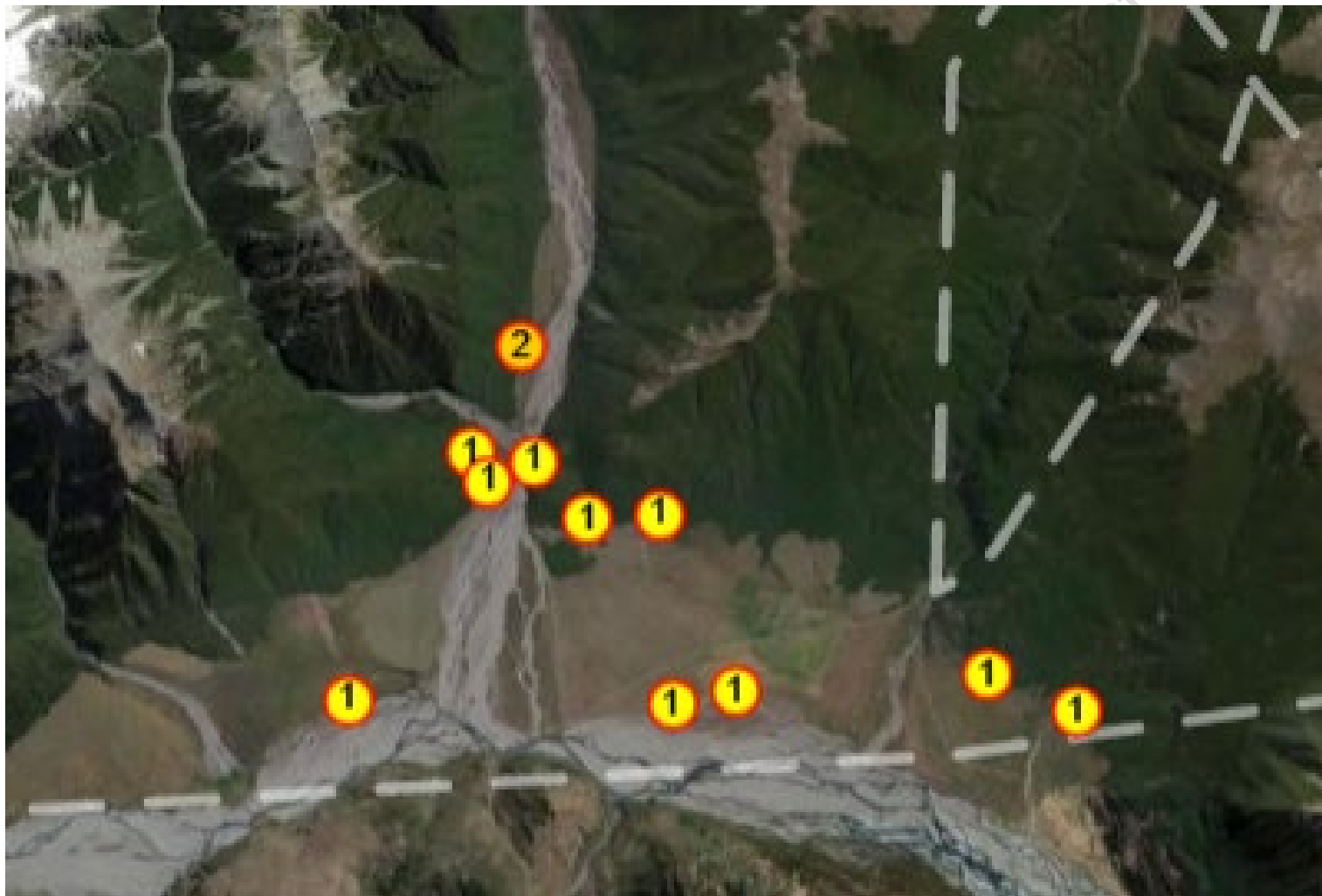


Figure 4: Map showing where cats have been caught between July 2021 and July 2022 in the Hawdon Valley.

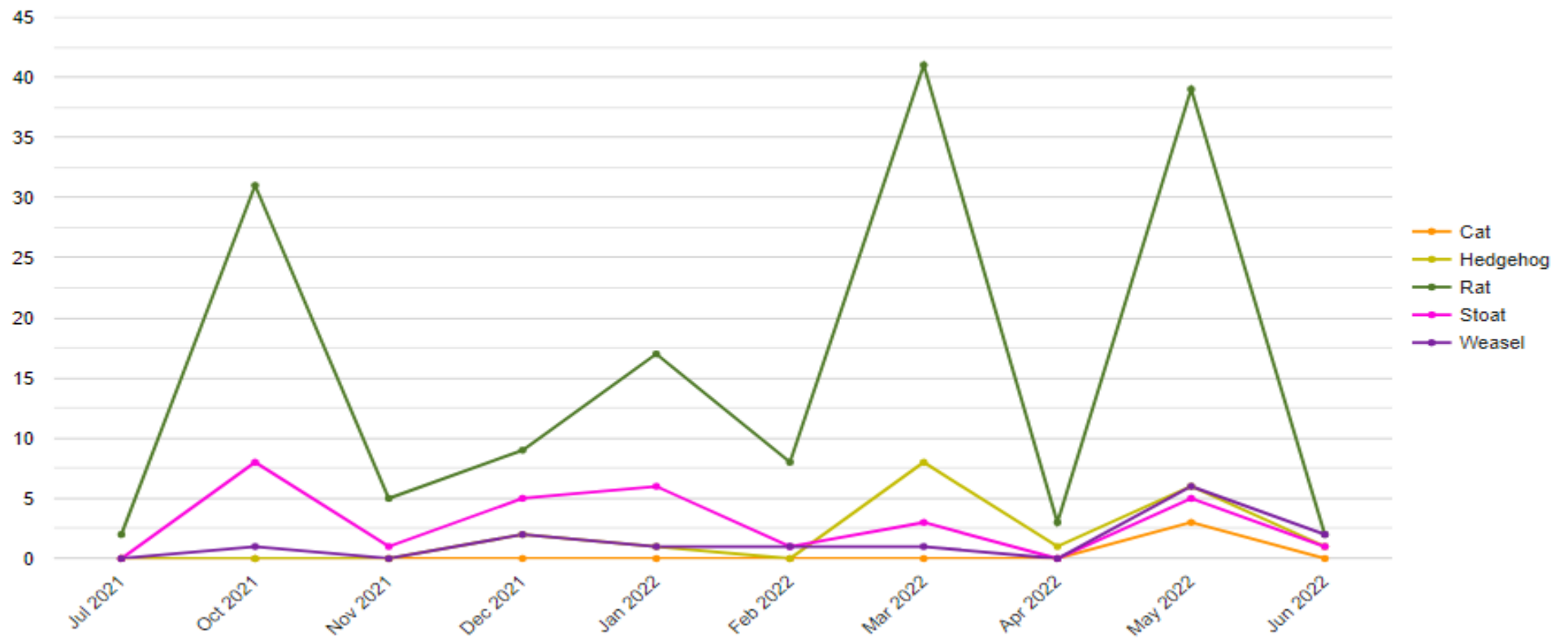


Figure 5. Monthly total for predators caught in the South Branch Hurunui. Note traps were not checked in August 2021 and have yet to be checked July 2022, this due to capacity, access or weather conditions. Of note Nov and April few traps were checked.

Released

Work programme (includes captive, operations, and research)

SITE	Last Month – <i>What happened since last report?</i>	Next Month – <i>What is planned for next month?</i>
Rangiora	<p>South Branch Hurunui</p> <ul style="list-style-type: none"> • Service feeder cams - SB • Refill feeders South Branch • Research SB winter stock up - seeds, cameras, batteries etc • Hut check list update • Cat trapping live capture • Install more cat traps • Add motolures to cat traps • Pig control Hawdon <p>Hawdon Valley</p> <ul style="list-style-type: none"> • Clearing area for portacom in Hawdon • Prepare new release site • Install new aviaries • Photo analysis • Training hikingNZ and others (monitoring team to learn) how to run the cat trapping network • Trap checks and maintenance <p>Poulter Valley</p> <p>Office</p> <ul style="list-style-type: none"> • Monitor new feed trials • Clean feeders and fix feeders • Team analysis for feeder cameras • End of season report writing • Translocation/Monitoring debrief with Brook Sanctuary chair, ecologist and volunteers 	<p>South Branch Hurunui</p> <ul style="list-style-type: none"> • Service feeder cams - SB • Refill feeders South Branch • Research SB winter stock up - seeds, cameras, batteries etc • Hut check list update • Install DOC200s at cat traps • Cat trapping live capture • Install more cat traps • Add motolures to cat traps • Service pig feeders <p>Hawdon Valley</p> <ul style="list-style-type: none"> • Clearing area for portacom in Hawdon • Prepare new release site • Install new aviaries • Photo analysis • Training hikingNZ and others (monitoring team to learn) how to run the cat trapping network • Trap checks and maintenance • Cut walking track into research biv • Pig control Hawdon • Add motolures to cat traps • Install more cat traps Andrews <p>Poulter Valley</p> <ul style="list-style-type: none"> • Attach power in the Poulter <p>Office</p> <ul style="list-style-type: none"> • Monitor new feed trials • Clean feeders and fix feeders • Team analysis for feeder cameras • End of season report writing

Oruawairua	<ul style="list-style-type: none"> • Nest search • Track maintenance • trap checks • Clean and check cameras at Brook • Build nest boxes (take supplies up) • Logistics - cleaning boat quarantine • Build relationships with local Rūnanga • Brook and Blumine survey • Lodge Resource Consent application for huts 	<ul style="list-style-type: none"> • Cat bait stations to build • Nest search • Track maintenance • trap checks • Clean and check cameras at Brook • Build nest boxes (take supplies up) • Logistics - cleaning boat quarantine • Build relationships with local Rūnanga • Brook survey
Science	<ul style="list-style-type: none"> • Field research described above • Progressed discussions on RFID bands, feeder modifications, transmitters, post-grad students, etc. • Clarified Blumine Island survey requirements and updated associated protocols • Updated several minor app features • Revised population chart for South Branch Hurunui • Generated Brook Sanctuary population estimate and chart • Circulated memo for GG describing methods of population estimation • Investigated data errors and inconsistencies • Cleaned and edited recent and historical data records • Began analysing 2021/22 field data 	<ul style="list-style-type: none"> • Field research described above • Complete RFID band and reader trials and reporting • Refine and test feeder modifications • Modify app to record more detailed data on other threatened species • Continue analysis of 2021/22 field data • Commence GIS analyses on 2021/22 field data • Revise history of nests in Hawdon • Plan digitisation of historical data
Captive	<ul style="list-style-type: none"> • Some breeding continuing at Isaac's and Orana Park, chicks will be held over winter. • 1 male from a breeding pair of kakariki killed by a rat at Isaac's. 3 rats caught over a 2 week period in one aviary. Still some uncertainty about how the rats are entering the aviary. • 1 female kakariki at Orana Park died - cause unknown 	<ul style="list-style-type: none"> • Construction of additional aviaries at Isaac's and Orana Park is progressing. • Prepare concrete strip foundations – Orana Park • Review quotes for construction – Isaac's