



Game Report 2021

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Summary of the Season

Nau mai, welcome to the 2021 game report.

It has been an active and diverse year for staff managing our game resource. We had a busy year on the participation front, with regular organised hunts, the inaugural Tasman Pine upland game hunting programme and an incredible game food night to see the season out - an absolute highlight of the year. We will be looking to promote upland game hunting further next season too, particularly in exotic forestry, and we have an exciting new access agreement in place with one of the major forestry companies, OneFortyOne.

Importantly, our base of licence-holders grew which was an important outcome for this region - hopefully this trend continues in the following years. One of the main reasons for this is likely due to the number of kiwi's returning back due to the pandemic and making this region their home, and staff fielded a higher than normal number of calls from hunters new to the area leading up to the season about where to go. We would also like to think that some of our participation initiatives may also be having an effect by encouraging new hunters into the sport and, crucially, retaining our base of existing members.

The low mallard (greylard) population continues to provide challenging hunting, especially for people new to the region and even more so for those new to hunting. Thankfully, most hunters that reside here realise it is difficult to quickly 'grow the duck population' through wetland creation and the likes, when in reality, we just don't have the agricultural landscape that attracts mallards. In light of this, we certainly have our challenges ahead to maintain and grow hunters in this region, and encouraging licence-holders to also target other valued gamebirds that are plentiful (e.g. swan, quail, shelduck) will be important going forward.

Finally, on behalf of staff, we would like to sincerely thank our elected Fish & Game Councillors for their efforts over the past three years. Your involvement in the Governance of this Fish & Game region stems from a passion for angling, hunting, and in many case both, and is to be applauded. In particular, we have a number of long-serving Councillors that did not seek re-election this year. Anglers and gamebird hunters owe you a debt of gratitude for your considerable involvement, keeping the ship steady through the many challenges that face this organisation, and fishing and hunting in general - so thank you.

Ngā manaakitanga

MONITORING

Annual trend counts are undertaken for mallard, swan, paradise shelduck and shoveler to ensure hunter harvest remains sustainable. These use both fixed wing plane and ground based counts.

MALLARD (GREYLARD) DUCKS



Mallards were counted across 65 sites in Nelson/Tasman (36) and Marlborough (29), though only 58 sites are used in the comparison data between years - see appendix for raw data.

The table below is a summary of the five sub-regions in which the counts take place. As it can be seen, the counts make for poor reading with mallard numbers down in both Marlborough (29.6% decrease) and Tasman (14% decrease), and an overall decline across the region of 21.4%. Even the wet spring of 2020 (which would have shown in an increase in mallards in other regions) appeared to have had little effect on the mallard population, meaning seasonal wetness may not have the impact it is thought to have for this region, which has a distinct lack of grain, cereal or pea cropping in the landscape - considered to be a key requirement for an abundant regional mallard population.

MALLARD MONITORING RESULTS

	2016	2017	2018	2019	2020	2021	
Motueka	376	486	401	274	310	304	
Nelson	947	1024	1258	1447	881	925	
Golden Bay	266	386	472	508	680	381	
TOTAL NELSON/TASMAN	1589	1896	2131	2229	1871	1610	↓ 14.00%
Havelock	190	251	225	263	314	117	
Blenheim	1320	1368	1586	1441	1451	1126	
TOTAL MARLBOROUGH	1510	1619	1811	1704	1765	1243	↓ 29.60%
TOTAL	3099	3515	3942	3933	3628	2853	↓ 21.40%

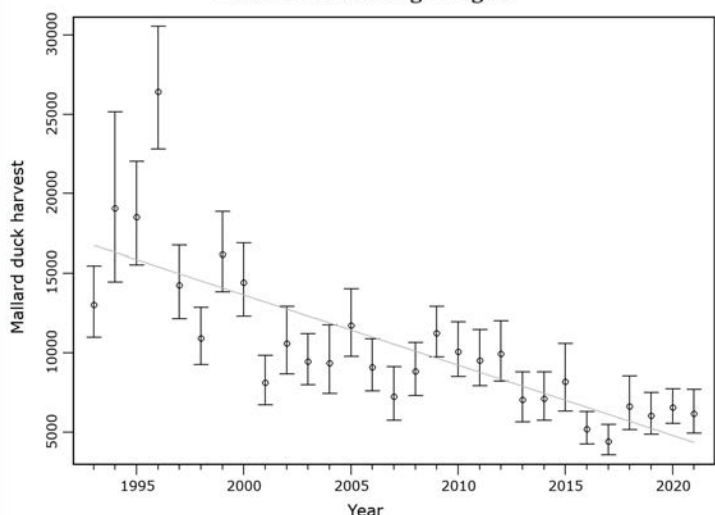
GREYLARD HARVEST

Game harvest data, collected as part of the national game harvest data surveys 100 hunters periodically over the course of the season.

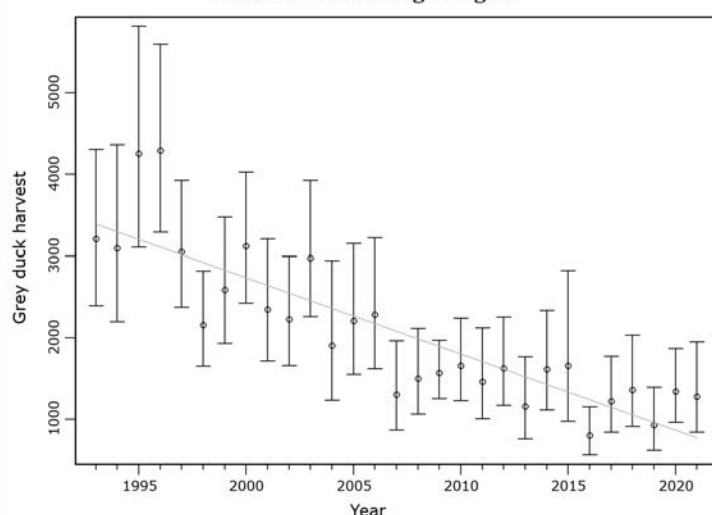
Harvest for greylards this season was fractionally lower than last year, estimated to be 6,157 mallards and 1,279 greys (total greylards 7,436). With nearly 200 more licences sold this season compared to 2020, the mean number of greylards harvested per hunter was considerably lower, at just over 6 birds for the season, down considerably from last season.

Grey duck harvest is slightly lower than the previous year and shows an overall decline along with mallards. An estimated 1,279 greys were harvested, around 20% of the 'greylard' harvest. This grey percentage is fairly typical, however, interestingly, the grey duck harvest from the duck diary group was much lower this year at around 6%.

Nelson/Marlborough Region

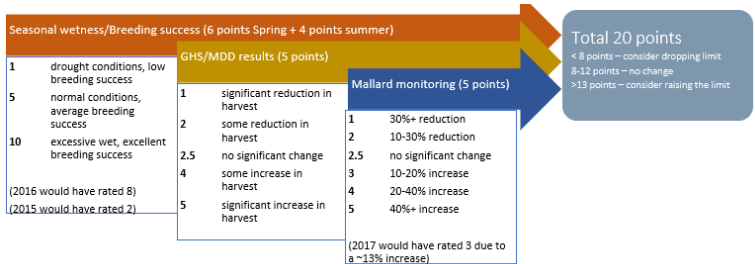


Nelson/Marlborough Region



GREYLARD LIMIT FOR 2022

Based on the scoring system below and available data which factors in seasonal wetness/spring breeding success, mallard counts and game harvest data, staff have assigned a score of 11/20 which recommends no change to the current daily bag limit of 8 birds per day.



^ See Appendix for larger version

Staff scoring:
 Seasonal wetness/breeding success: 7/10
 Mallard monitoring: 21% decrease in N/M: 2/5
 Game Harvest Data: slight decrease in harvest last season but very small: 2/5
 =11/20 – recommend no change to limit

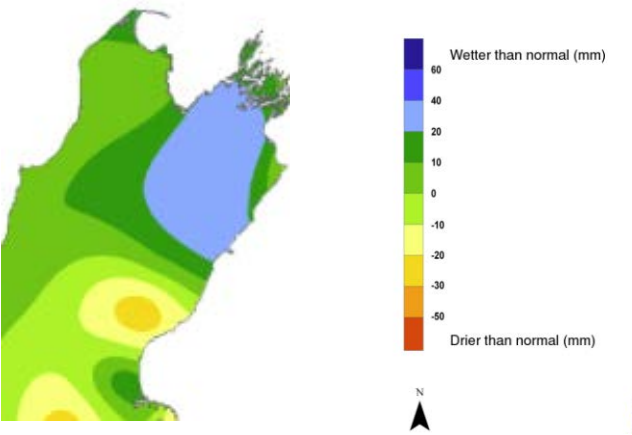
For this process soil moisture maps are used to assist with determining seasonal wetness, as well as staff observations.

This year we experienced a very wet winter and early spring, and as of early November there are more bodies of standing (ephemeral) water around than last year (when rain fell quite late in Spring). This should bode well for mallard breeding success, however, time will tell if an increase in the mallard population when counts are undertaken in late March.

This year we also decided to split the seasonal wetness score to take in summer breeding conditions, therefore 6 of the 10 points will be apportioned to the Spring conditions and 4 points to the summer conditions. The summer score will be confirmed in late January just before the game notice is confirmed, and until then a mean score of 2 points has been given.

The Soil Moisture Anomaly shows the difference between the current and historical soil moisture deficits. It can be seen from the map below that it has been wetter than normal across the entire Nelson Marlborough region, with Rai/Pelorus and Molesworth areas far wetter than normal.

Soil moisture anomaly (mm) at 9am on 01/11/2021



^ The Soil Moisture Anomaly indicates the Nelson Marlborough region to be wetter than normal as of 1 November



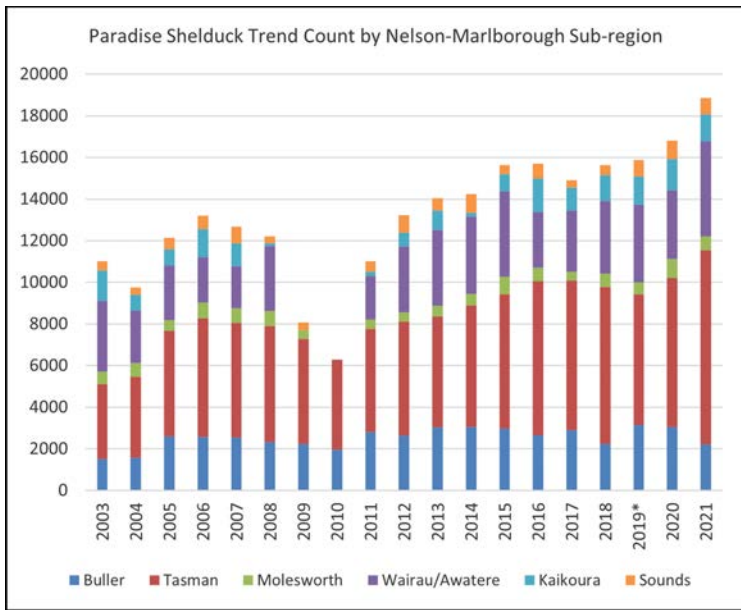
^ Ephemeral waterbodies are important for the breeding success of mallards.



PARADISE SHELDUCK

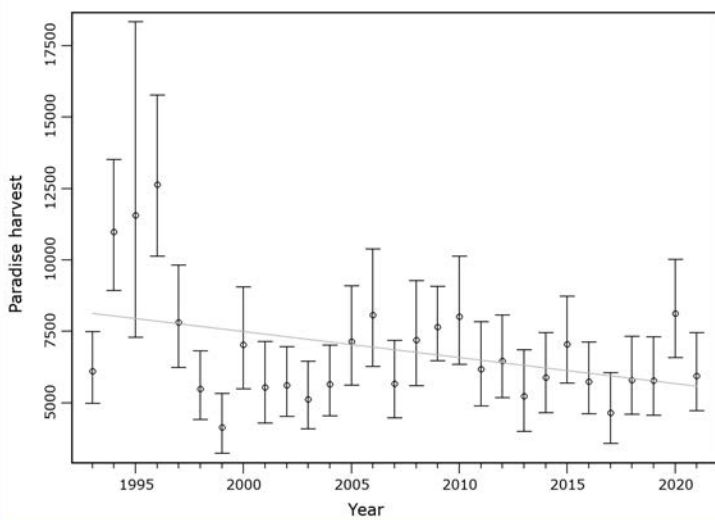
Paradise shelduck trend counts were completed in late January using fixed wing aircraft and ground based methods.

It can be seen from the graph below shelduck counts have significantly increased on last years' count (which was already the highest count in at least two decades). The growth was mostly from the Tasman/Golden bay sub-region with over 2000 additional birds counted, however the Wairau/Awatere sub-region also saw a notable increase on the previous year. The Buller sub-region experienced a significant reduction in birds.



SHELDUCK HARVEST

After what appeared to be an increase in harvest for the 2020 season, the game harvest calculations indicate a drop in shelduck kills for the 2021 season, with 5,938 birds taken - quite a surprising result.

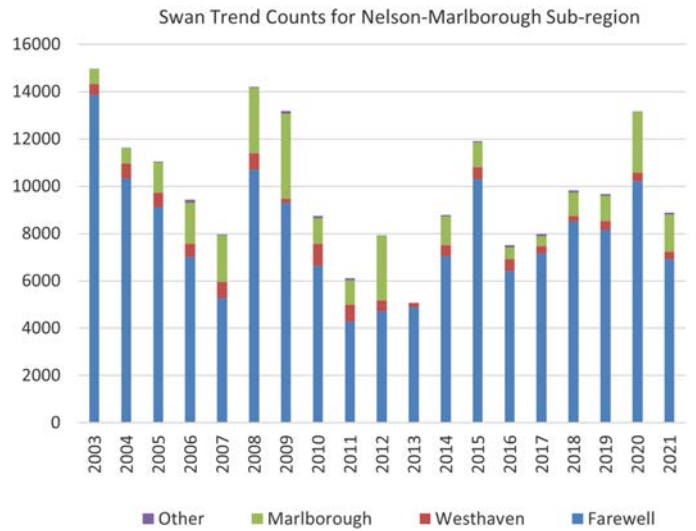


All told, it has got to the point in the Tasman-Golden Bay sub-region where a potential increase in the daily bag limit may be warranted. If the January 2022 trend count exceeds or is even level with the 2021 count, it is recommend there be an increase to the daily bag limit for the 2022 game season. The Council should also consider what the ideal capacity should be, particularly for the areas where shelduck complaints are most numerous, and adjust the limit accordingly.

SWAN

Swan counts were undertaken simultaneously with the shelduck counts, using fixed wing and ground based counts.

As the graph below shows, numbers of swan counted during the trend flight was lower than the previous few years, but appear as a fairly normal population fluctuation. As swan can be fairly transient, and hunter effort targeting swan is low, staff have no concerns with the numbers counted last January.



SWAN HARVEST

Game harvest data confirms that a low harvest rate for swan occurs, with an estimated ~200 swan taken by hunters in this region. This low harvest rate is fairly typical when making comparisons between years.

Fish & Game were recently contacted by Cawthron to see if Fish & Game could organise a swan cull in Golden Bay. The premise behind the request was to do with current research on eel grass (found in good quantity in Western Golden Bay where most of the swan reside).

Eel grass is a possible blue carbon sink, and there is concern that swans are negatively impacting on eel grass and subsequent ability for storing blue carbon.

No further action has been taken, and it is unlikely a cull in this area would be undertaken by Fish & Game for a host of reasons.

Note: raw data from swan and shelduck trend counts can be found in the Appendix.



> Not many hunters specifically target swan, more as a bonus while mallard hunting.

SHOVELER

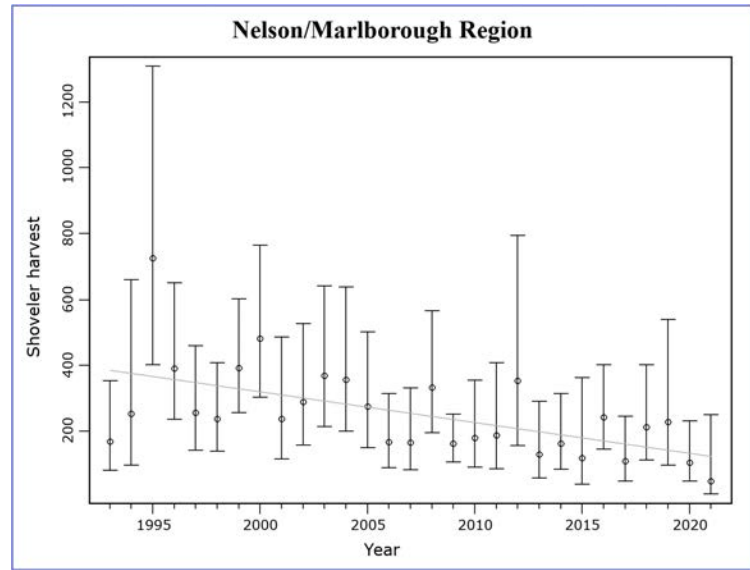


Fish and Game New Zealand conducted a national count of kuruwhengi, shoveler duck on 3 August 2020. This is the 22nd annual count (2000 – 2021) to monitor change in the New Zealand population.

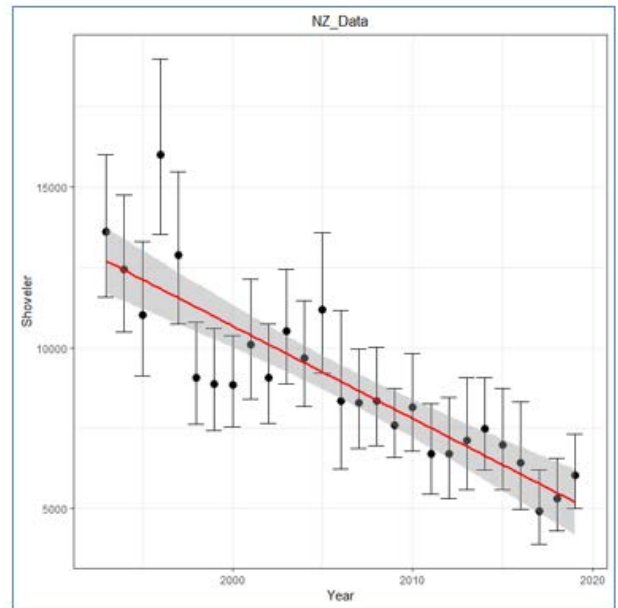
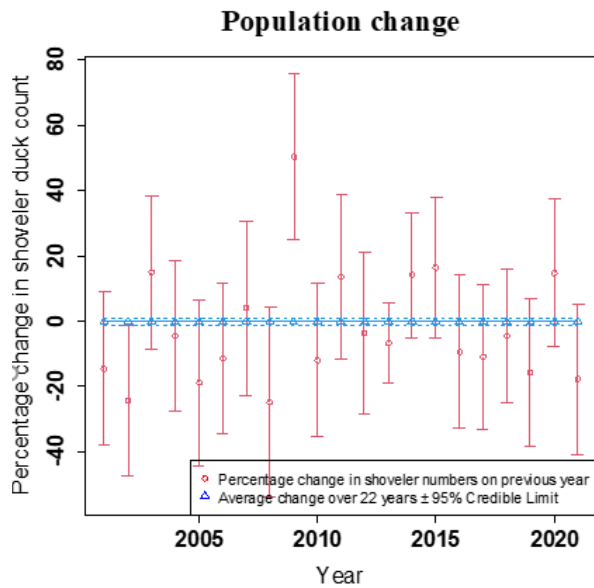
A total of 10,436 shoveler duck were counted at 244 sites (cf. 2020, 11,325 shoveler at 240 sites). This was the lowest total count since 2010, although a howling Southerly throughout much of New Zealand on the count day may have influenced this result.

Over the 21 years the population at these sites appears to be stable. The 2021 total count for sites that have been counted every year (n=81) was 16% below the average for the period 2000 – 2019 but was similar to last year's count. The long-term trend at these 81 sites indicate no linear increase over the last 22 years - see graph below

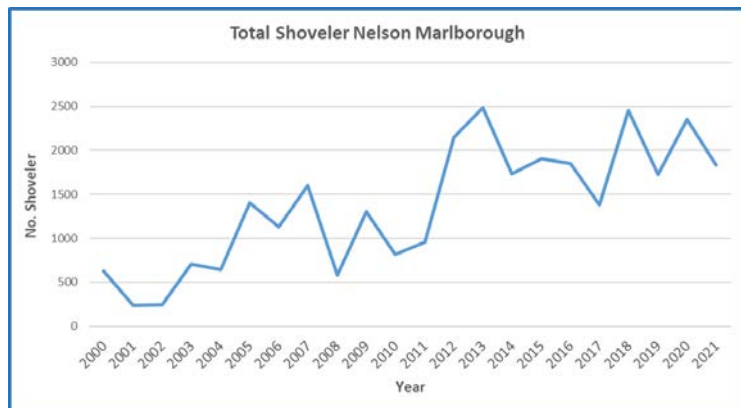
It was estimated from the game harvest survey that just 48 shoveler were harvested in this region - a very low harvest rate considering the population (<3% of total counted regional population).



This declining harvest is in line with the national trend also - see graph below. As with swan, few hunters specifically target shoveler, they are an added bonus to diversify the bag.



In this region, 1831 shoveler were counted, with the majority of these from the Wairau Lagoons. This is down from 2020 though a fairly normal fluctuation when monitoring this species.



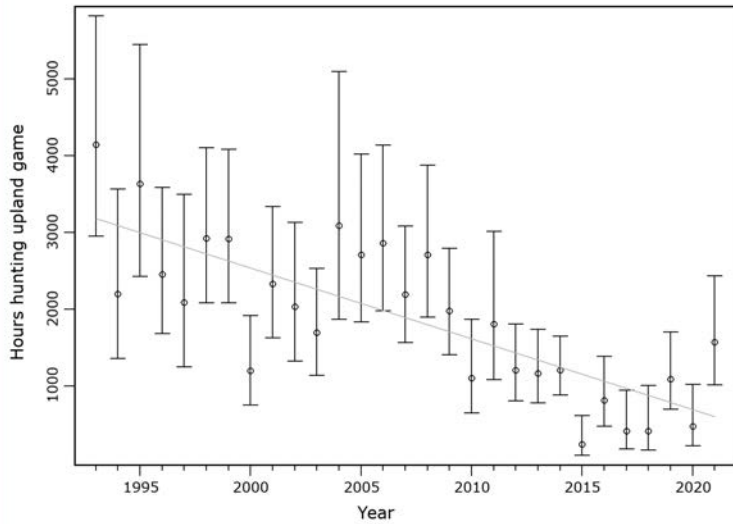
> Shoveler are not often targeted by hunters, however they are always a welcome bonus to any hunt.

UPLAND GAME

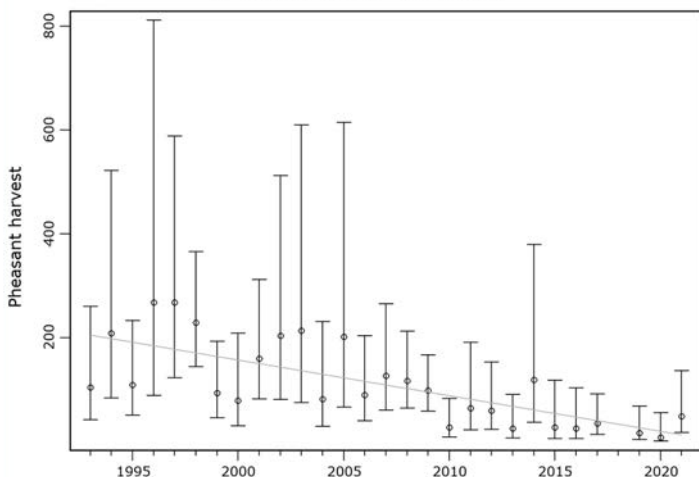
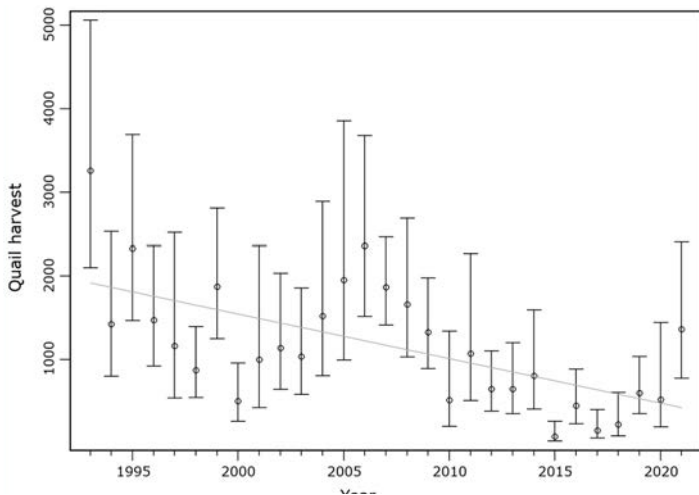


It appears the push to promote upland game hunting in this region may be having an effect somewhat, as evidenced by the game harvest data. For the 2021 season, game harvest calculations show 1573 hours were dedicated towards upland game hunting, a large increase from 2020 where 478 hours were estimated.

Nelson/Marlborough Region



Of course, with the increase in effort, there was an expected increase in harvest also, with an estimated 1,364 quail and 49 pheasant harvested. This was up considerably on the 2020 season figures of 522 quail and 8 pheasant.



PUKEKO

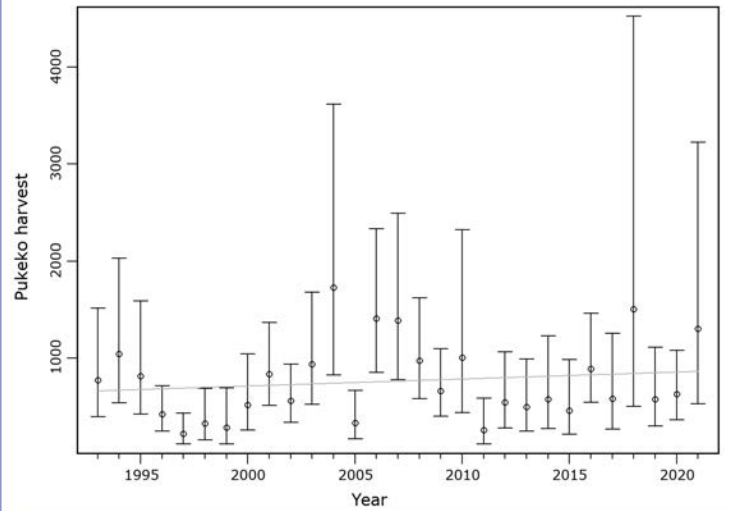


Pukeko are prolific in this region, with monitoring of these birds based on casual observations and landowner complaints, which occur on a regular basis.

While Fish & Game encourage hunters to target pukeko via media channels, and also have a very liberal season and limit (in Nelson/Tasman/Golden Bay), it appears they are still a low priority bird for hunters.

Game harvest calculations suggest that around 1,300 pukeko were harvested over the course of the 2021 game season.

Nelson/Marlborough Region

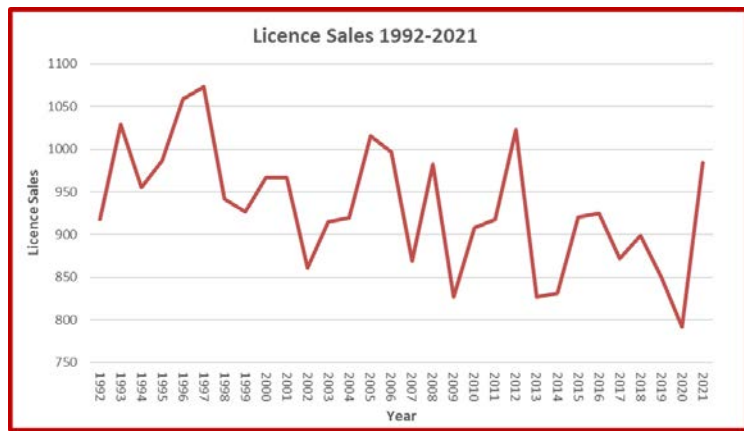


^ A great day on quail in one of the Tasman Pine blocks. Photo Jack Gauld.

HUNTER EFFORT SUMMARY

LICENCE SALES

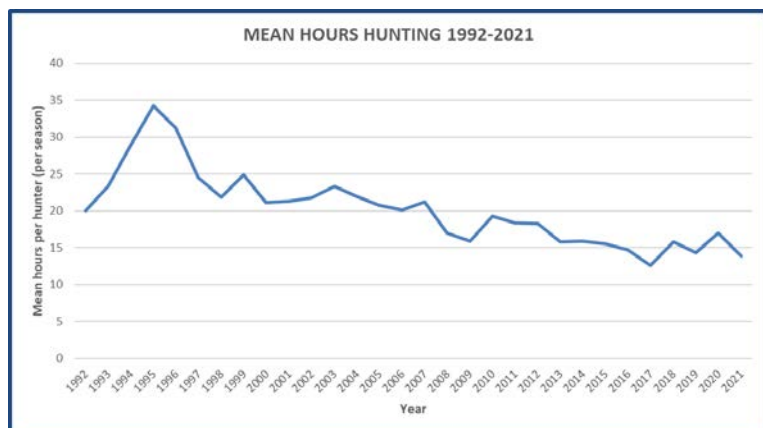
Licence sales increased significantly for this season, with almost 200 more sales compared with 2020 (which was an all time low for this region). This result is pleasing, nevertheless somewhat perplexing considering the limited waterfowl resource and relatively tough hunting in this region. One possible explanation is due to the number of kiwi's returning home from overseas as a result of the global pandemic - a similar trend was shown in the fishing licence sales nationally last season.



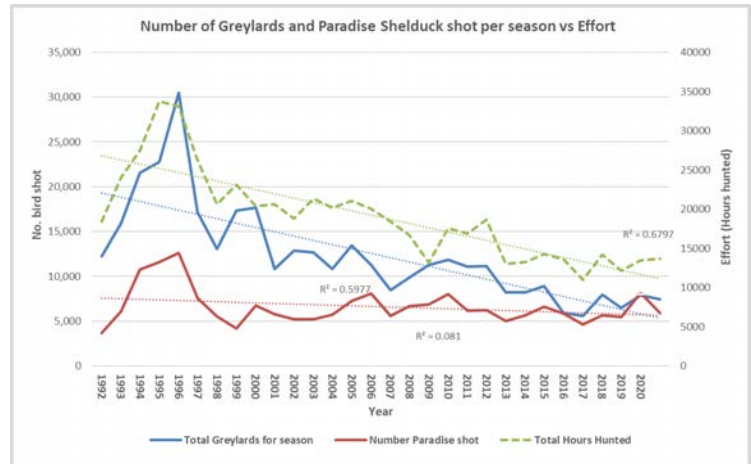
HUNTER EFFORT

While total hours hunted increased slightly (due to 200 additional licence sales - see graph to right), the average number of hours hunted for the season per hunter was lower than last year, with an average of 13.9 hours per hunter (down from 17 hours in 2020).

It is also worth remembering that the mean hours hunting increased last year during a shorter season, meaning shortening the season may have little impact on increasing the mallard population - see graph below.



The next graph shows the total hours hunted with the estimated greylard and shelduck harvest, which, typically, follows the same pattern.



It is estimated 7,436 greylards were harvested for the 2021 season, lower than the 2020 season (7,894 greylards). Considering there were far more licences sold for the 2021 season, it would appear these lower harvest rates would reflect the lower count seen from our mallard monitoring.

A bigger mystery is the reduced shelduck harvest, which game harvest data suggest a mean harvest of 5,938 birds - far lower than the previous year and not reflective of the reasonably high (and increasing) shelduck population in this region.

This means hunters, on average, took home around 7.5 greylards and 6 paradise shelduck each for the 2021 season - lower than previous years. While the greylard harvest is steadily declining, paradise shelduck is still relatively stable.

EFFORT BREAKDOWN

Based on results from the game harvest survey, a total of 4,887 hours were spent hunting over Opening Weekend from 605 active hunters, and an estimated 1,637 greylards and 2,589 paradise shelduck were harvested (typically around 25-30% of Nelson Marlborough licence holders hunt in other Fish & Game regions over Opening Weekend). This means around 8804 hours were spent hunting outside of Opening Weekend - around 65% of the hunter effort for the season. For the period after the regular season concluded (26 July-28 August), it was estimated that just 236 hours were spent hunting waterfowl, accounting for 30 swan and 138 pukeko, however 335 hours were spent on upland game, accounting for an estimated 403 quail - showing the importance of this month for upland game hunting, and work should be done further promoting this. Of note, the 2020 estimate had just 39 hours and 23 quail harvested for the same period.



Hunter Diary Initiative

This year was the 5th year the Hunter Diary initiative has been in place and has again delivered some excellent information which is useful for game bird management. The basics of the diary initiative is utilising some of the regions most accomplished and regular hunters to upload their hunt statistics immediately after the hunt. As this group of hunters are very experienced, it is expected that the bird population should correlate with the harvest rate from these hunters. Additionally, the group provides very accurate information on things such as grey/mallard ratio, wounding rates and bird sightings.

For the 2021 season the group went on a total of 100 hunts, totaling 310 hunt hours (hunt duration), and harvesting 867 birds - the lowest count in the five years. Of this 60% were greylards, 33% paradise shelduck and 7% comprised of shoveler, swan and geese. Pukeko have not been included in these statistics.

	2017	2018	2019	2020	2021
Total birds shot	1266	1177	980	1333	867
Total hunts	150	182	153	135	100
Total hours	404.5	423	351.5	343	310
Birds/hr	3.13	2.78	2.79	3.89	2.80
Birds/hr/Per person	1.75	1.58	1.52	1.88	1.40
Wounding rate	N/C	5.01%	5.04%	5.25%	4.20%
% grey duck	21%*	25%	26%	24%	6%
Total greylard	548	517	374	567	541
Total shelduck	639	570	456	614	336
Total other (excluding pukeko & quail)	79	90	150	152	159
<small>*2017 limited dataset</small>					
Public/private land split %	47% / 53%				
Public land birds/hr	1.75 birds/hr				
Private land birds/hr	3.78 birds/hr				
Blenheim/Tasman hunt %	51%/49%				

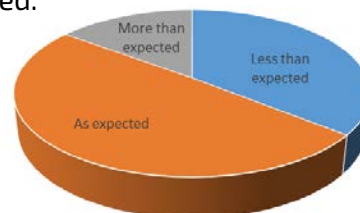
As seen in the table above, there was a decrease in effort, which of course leads to a decrease in harvest. Added to this, birds per hour ratio was lower than last season, however in line with previous seasons, remembering that the 2020 season was three weeks shorter due to the pandemic lockdown. Of course, effort entirely depends on the hunters themselves, and this can fluctuate between years (i.e., one hunter may not hunt as frequently one year compared to the next), and this does occur.

There was also an organised hunt which took place in the Wairau Lagoons, which accounted for 163 birds over the course of three days (totaling 135 hours of hunting for all persons combined). We have decided to leave these hunt statistics out of the calculations this year as it somewhat skews the data when making comparisons between years.

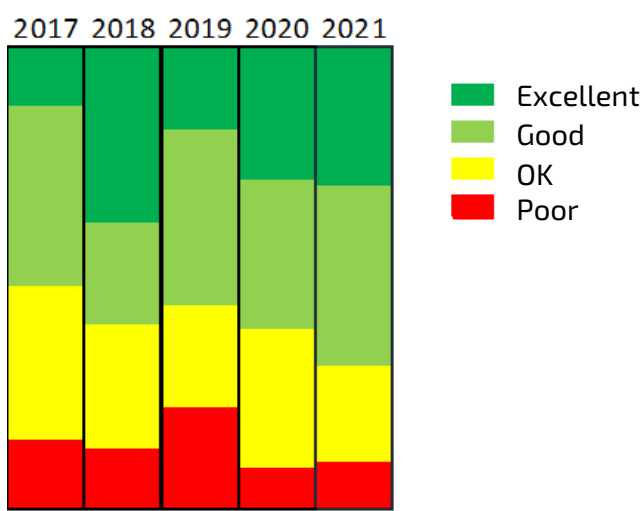
Grey duck harvest had been very similar in the previous four years at around 24% of greylard harvest, however the 2021 season saw a large decrease in the percentage of grey type ducks at only 6%.

Wounding rate was slightly lower this season at 4.2%.

This year, for around 49% of hunts, numbers of birds seen in the sky were as expected, however on nearly 36% of hunts the number of birds seen was less than expected. On 15% of the hunts more birds were seen than expected.

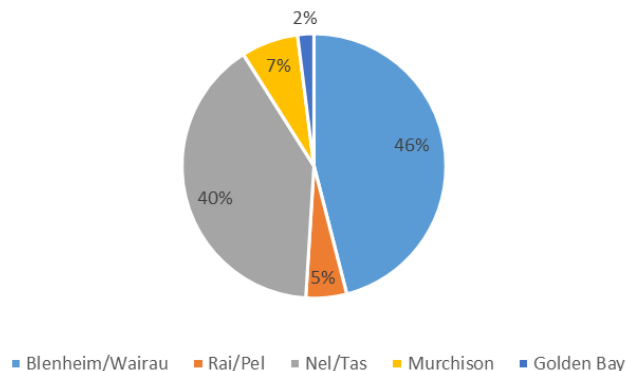


Hunt satisfaction is also monitored, and it can be seen in the graph below that 68% of hunts were determined as either good or excellent hunts, with 10% of hunts deemed to be poor.



The split of where hunting took place was fairly even between Marlborough and Tasman hunt at 51% Marlborough / 49% Tasman, with 46% of hunts taking place in the Blenheim/Wairau sub-area and 40% in Nelson/Tasman.

HUNTER EFFORT BY SUB-REGION 2021

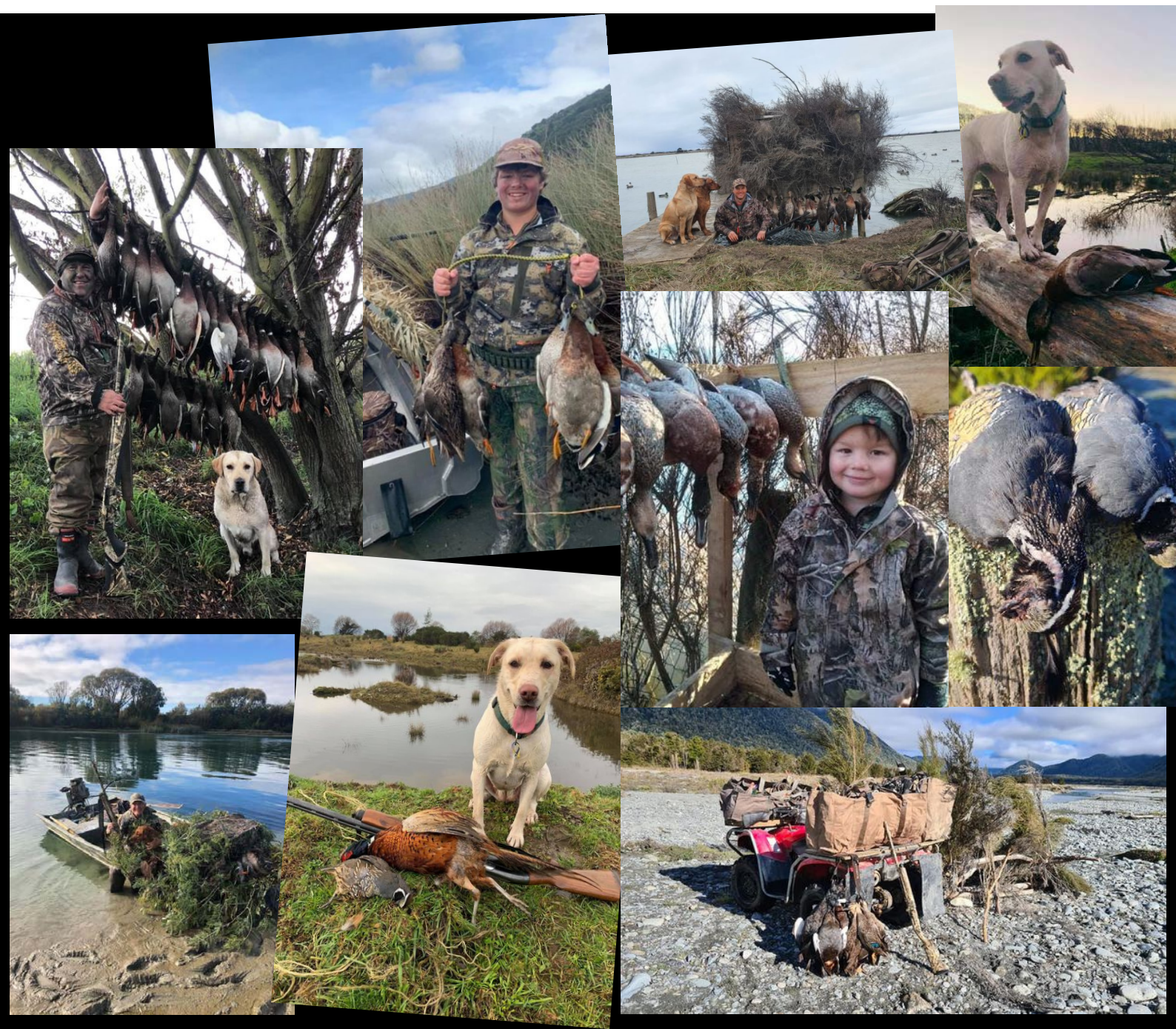


Though the split between private land and public land hunting was almost even, again, unsurprisingly, birds harvested per hour were higher on private land at 3.78 birds/hour on private land compared to 1.75 birds/hour on public land, however this is much lower than harvest rate compared to the 2020 season with 5.84 and 2.12 birds/hr respectively.

The hunter diary initiative is an excellent method to compare outcomes from the national game harvest data and game bird trend counts. It is pleasing to have such a great group of hunters involved and we thank the group for their continued efforts.

Thanks to MDD team Troy Appleton, Steve Holmes, Reice Piggott, Nev Gane, Marc Jary, Kieran Scott, Justin Weaver, Ian McLeod, Heather Baigent, Guy Gardiner, Cory Jones, Tristin Stone & Daniel Hovenden.

MDD IN PICTURES



PARTICIPATION

Fish & Game hold a number of organised hunting events in order to increase participation and hunter satisfaction. Below is a summary of what took place during the 2021 game season.

RABBIT ISLAND UPLAND GAME HUNT

The Rabbit Island upland game hunt was again very popular this year, with 30+ hunting groups applying for each of the three hunts (which has 9 hunting blocks available). This was the 5th year the organised hunt has taken place, meaning we are now half way through the 10 year Moturoa/Rabbit Island Management Plan term duration that we have permission to hunt for.

This year we ran the ballot system, that if you were successful in winning the ballot you would not be in the running for other hunts, thereby increasing participation as much as we can.

Hunting-wise, this year was tough going - mostly due to poor weather which featured on all three weekends. We had to move to the reserve day for one of the hunts, however even for the other hunts damp conditions meant dogs had a tough time of things tracking birds.

As a result, zero pheasants were shot, though some hunters experienced decent to very good quail hunting. In all honestly, this hunt is becoming more of a quail hunt in terms of birds harvested, and pheasants are more of a bonus bird. In saying that, pheasant habitat is steadily improving on the eastern end of the island where the hunting takes place, with more harvest of mature pine trees taking place each year.

Considering that Rabbit Island is very popular with the public, we have had few issues managing the hunt so far, and there is generally little negativity from our dealings with the public. We have staff managing the public on the beach where access down the Eastern end is prevented for the duration of the hunt, and also at Boat Point Road.



^ What we like to see - an empty beach meaning hunters do not have to worry about proximity to the public.

WAKAPUAKA PUKEKO DRIVE

The annual pukeko drive at Wakapuaka went ahead in July. After a poor turnout in 2020, a concerted recruitment drive was undertaken to boost attendance for the 2021 event, which worked well with over 70 hunters turning up on the day.

This year we decided to run the hunt a bit differently, essentially running the hunt as one large drive, rather than splitting the farm and running two separate drives. In the end, while around 300 birds were harvested, this was probably not as effective as splitting the farm into two drives, which may have seen a higher number of birds taken.

Still, it was a day that was thoroughly enjoyed by all, and it was great to see plenty of young faces there enjoying the day out too. All meat was taken from the bounty to be used in the game bird food night - see next page.



^ It was a family affair at the 2021 pukeko drive.

Next year we will promote the hunt as we did this year to ensure high attendance, and potentially return to a two-drive format in order to maximise bird numbers.

Bird numbers are very high on this farm, with the large population of pukeko having a significant affect on farming operations, which is the reason behind holding the hunt in the first place.

It is an added bonus that the event can cater for many hunters, which has positive spin-offs in terms of engaging and retaining hunters in this region.

TASMAN PINE UPLAND GAME

The inaugural Tasman Pine upland game season commenced this season, and was well patronised by hunters with over 50 blocks booked over the season and many hundreds of hunting hours achieved.

In the first few weeks, all eight available blocks were booked each week, then it tapered off as per the norm across the middle to latter part of the season, with a list of regular hunters frequently booking blocks, and occasional new hunters also.

Hunting was tough going at times, as quail tended to be in coveys low down in the catchments rather than scattered throughout the block (remembering most of the hunting blocks fell within the affected area of the Pigeon valley fire). Nearly all hunters got onto birds each time, with the more proficient hunters securing better bags.

Thanks to the efforts of Councillor Jack Gauld, we also managed to undertake some pheasant enhancement in the lower Eves Valley, both with hens and roosters during the prior Spring, and also roosters during the season. It was great to receive reports of hens with young pheasants in tow over the summer period, and also plenty of rooster sightings before and during the season - the birds appeared to have taken well to the area. A number of roosters were taken by hunters during the season at Eves Valley - a great bonus to the predominant quail harvest.

So, all in all, a successful first year. The permit process went very smoothly, and Tasman Pine management are very happy with the process and how the season went.

We firmly believe that there is huge untapped potential in hunting these forests (mostly for quail, but also ducks), and that the current permit requirement and associated cost is acting as a hindrance for gamebird hunters. We have now removed that barrier, and the uptake has been great from hunters. Now we have an access agreement in place to access large areas of OFO forest estate in Marlborough and Tasman, which will compliment the Tasman Pine upland game hunting arrangement we have - see Access chapter.



^ The public notification signage was effective and easy for hunters to manage.

GAME FOOD NIGHT

A stellar gamebird food evening last night, held at Club Waimea in Richmond. Chef/hunter Phil Hazeldine wowed the 80 strong crowd with 15+ incredible game bird dishes.

It was kicked off with pheasant thigh and chestnut crepe with salmon caviar, followed by orange and mallard on kumera rosti with brandy reduction. Then it was off to Mexico with twice cooked beans and parrie duck on a masa tortilla, and over to Asia with incredible pukeko dumplings (meat supplied from pukeko drive) - a crowd favourite. After all this diners had to get through pukeko soup, pan seared pheasant breast, sweet and sour goose, pukeko sausage rolls, apple and brandy pheasant casserole and more - then munch their way through the grand finale - a mallard wellington (with pukeko pate).

Mayor Tim King was invited and attended with his wife which was great - they both really enjoyed the food and company.

Massive thanks to Phil Hazeldine for putting the night on again in what is a fairly herculean effort, we are very fortunate to have him in this region.

Phil has indicated he's keen for next year, though this will likely be the last one. He really wants to base the evening around quail, so we will have to tap a few keen quail hunters on the shoulders as around 150 birds will be needed.



ACCESS

DOC UPLAND GAME

Staff have been working with DOC South Marlborough to facilitate upland game hunting on DOC estate (non National Park areas where shotguns/dogs are permitted).

These are areas such as the Branch/Leatham and DOC blocks in the Awatere Valley.

As with Molesworth chukar, hunters will apply to F&G for a permit, and we will issue them a permit on behalf of DOC, therefore taking away the administrative burden of the permit process from DOC.

F&G TO MANAGE PERMITS FOR WAIRAU LAGOONS HUNTING

It is highly likely we will be taking the permitting over for the Wairau Lagoons also, and we believe that though there will be some extra administrative time, there are significant benefits including valuable contact with licence-holders, and also taking the burden off DOC staff who have plenty of work on their books and being able to deliver a permit to gamebird hunters in reasonably quick time.

GROVETOWN LAGOON

Due to the Grovetown Lagoon loop track that has been recently formed, there has been significant liaison between Fish & Game and Te Whanau Hou Grovetown Lagoon Restoration Project in regards to gamebird hunting there. Hunters have been asked to not hunt between 10am and 4pm due to the walking track around the outside of the lagoon being increasingly popular with walkers. Fish & Game also managed to get a number of Grovetown Lagoon hunters to submit on MDC's draft management Plan for the Wairau Lagoons to help ensure managed hunting can continue there in future.

VERNON LAGOON ACCESS

Access to the southern parts of Vernon Lagoons from Redwood Pass road was again been negotiated with the Vernon Station Manager. Unfortunately complaints were received from the Farm Manager at Vernon Station about hunters driving too fast and damaging the "duckshooters access" track from Redwood Pass Road to the Southern Lagoons, and not leaving the gates as found. This was resolved by a commitment From Fish and Game to repair the rutted areas of track with some gravel in summer once the track dries out as well as some education to hunters about gates and driving speeds.

OFO FOREST UPLAND GAME ACCESS

Staff are excited to announce another fantastic upland game hunting access opportunity.

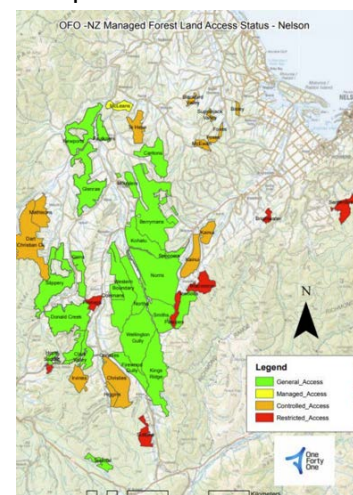
We have met with major forest management company OneFortyOne (OFO) and has successfully negotiated upland game hunting access to three large open areas of forestry (North Bank Road, Rai/Pelorus/Golden Downs), as well as other restricted access OFO forest blocks: Ngaruru (lower Branch) & Bannochburn (Awatere).

The access agreement is to provide for hunting on one weekend per month of the game bird season, where hunters will apply to F&G and be listed on a bulk permit for the area they chose to hunt (max 10 hunting groups for each Northbank, Rai & Golden Downs = 30 hunting groups per month).

Essentially this takes away the main barrier to hunting these quail rich areas: access. Formerly hunters would have to individually apply for their own permit and be charged \$50 per person, and now F&G will provide the permit at no cost to the hunter or F&G (just some staff time in issuing permits).

This new upland game opportunity completely compliments the Tasman Pine Forests upland game hunting arrangement, where hunters apply for one of eight blocks which are available for each weekend of the gamebird season (though foot access is only possible at gate entry points). Now, with the OFO access agreement, hunters can use their own vehicles to access vast areas of forest estate, to find and locate suitable hunting spots, or indeed quail coveys in passing. And while the experience may be different from a high country Marlborough experience, we know there are large numbers of quail that reside within exotic forestry, though following up on coveys may be less effective due to the nature of pine forests.

> An example of the vast area of hunting now available. All area in green will be able to be hunted. Similar large areas are also available in Rai/Pelorus and North Bank Wairau.



GENERAL

BELLS ISLAND SWAN CULL

After a considerable delay for authorities to give permission for an organised cull at Bells Island, we got given the green light to proceed.

A call was sent out to 25-30 hunters to assist which was eagerly accepted by most. On the day we surrounded over half of the pond with hunters, and used a boat to disperse approximately 100 swan and a few geese over the hunters. Unfortunately, the swans found the best exits out of the pond and only 30 swans were shot, along with a few geese.

We will be running a cull here again next season, and will ensure we have around 40 hunters to fully surround the pond. In saying that, a good number of birds will always escape, so we may have to look at doing a moult cull over summer for swans as well as geese.

After the swan hunt, an impromptu pukeko drive was held around the exterior of Bells Island, where a band of scrub exists. This was thoroughly enjoyed by the hunters, with around 200 birds taken in fairly short time - a great bonus hunt.

CROP DEPREDATION

A total of 45 crop depredation permits were issued for the 2020-21 year. Most of these were for pukeko, but a fair number were also for shelduck issues pre and post moulting.

CHUKAR SEASON CANCELLED

Unfortunately the chukar season had to be cancelled due to an aerial 1080 operation that took place just before July.

DOC did not allow any hunting to take place in the aerial control area for at least three months after the operation, therefore we had no choice in the matter.

There were quite a few block bookings for the month - mostly around Tarndale, however most hunters who had blocks reserved are interested in retaining these for the 2022 season.

It will be interesting to see what affect the 1080 control has on the chukar population here (anecdotally it is generally positive), though we will be relying on observational reports from hunters rather than any formal monitoring.

WETLAND DEVELOPMENT AND MAINTENANCE

Lawson Davey has been assisting Tasman District Council (on a temporary cost recovery basis) with their Catchment Enhancement and Freshwater Improvement Funded programmes until they manage to fill the currently vacant staff position.

Currently work is underway on a multi-purpose wetland design and consent for an area of forestry land upstream of the Eves Valley Reserve. The area was burnt in last year's fire, with the stream being ephemeral and drying up regularly in summer. The aim is to provide a water source for firefighting purposes, and provide additional habitat for the threatened species, particularly Giant Kokopu and Shortjaw Kokopu, which are present in the Eves Valley Reserve downstream, as well as providing additional gamebird habitat and hunting opportunities. All going well Eves Valley wetland will be built prior to Christmas.

Other work includes visiting wetland sites and assessing their values, weed threats etc, and providing advice to landowners regarding wetlands.

In other Fish & Game wetlands, general work such as weed spraying and planting have taken place at most wetlands, including Sunrise and Supplejack, Gibbs Road & Challies Island.

See following page for Para Wetland information.

RABBIT ISLAND TRAPPING GROUP

The Rabbit Island Trapping Group, comprised of Robert Dodunski, Graeme Ivey and Chris Tonkin, continues its fantastic conservation work in an effort to reduce the impact of predators on native and game birds.

The great work this group does alongside Fish & Game is acknowledged by environmental groups such as Tasman Environment Trust and the Waimea Inlet Forum, and is a good way for hunters to be portrayed in a positive light (social licence) by the general public and those with a conservation mind.

We have also been asked to be involved in Project Moturoa - a trapping initiative to reduce predators across the entire Motura/Rabbit Island.



KAIKOURA WHALE TRAIL

A considerable amount of time has been spent on matters relating to the proposed Kaikoura Whale Trail, which route runs adjacent to the Fish & Game owned and managed wetland, including a short section of the trail that runs through Fish & Game owed land. The proposed cycleway in places traverses within 50 metres of some existing hunting spots within the wetland, creating potential future risk to both the viability of ongoing hunting at these sites, along with trail user safety.

Nelson Marlborough Fish & Game progressed a high-level MOU with the Marlborough Kaikoura Trail Trust (MKTT) to address these issues, moving forward in a manner that does not result in hunting loss or undue disruption to trail users, and at the same time promotes the wetland restoration project and its history to future trail users, thereby delivering on Fish & Game's national priority of retaining the 'social licence' of gamebird hunting among urban New Zealander's.

The MOU provides an understanding between parties to:

- Ensure hunting and trail use can co-exist into the future, including the possible closure of the trail during key hunting periods (e.g. Opening Weekend), and that MKTT will not be entitled to object to the effects of activities on the Fish and Game Nelson Marlborough Land adjoining The Whale Trail, including game bird hunting and the discharge of firearms, provided those activities are lawfully carried out.
- Maintain and enhance biodiversity of the Para Wetlands by providing screening at key points (through native plantings etc) to minimise effects on biodiversity (and recreational hunting).
- Showcase the wetland to inform the public the good work Fish & Game do on behalf of hunters (who fund the work through purchasing hunting licences).

Parties earlier agreed that in addition to the MOU, a suitable consent condition be imposed as part of this Cycle Trail consent, which would provide the Nelson Marlborough Fish & Game Council with some surety that hunting will be able to continue adjacent to the cycleway in the future, providing hunting is undertaken in a safe manner, regardless of whether noise complaints or similar are received by the consent holder from trail users (unfortunately, this was unable to be negotiated prior to the limited notification of this consent, meaning a submission was required).

This condition will now be added into the consent as part of resolving Fish & Game's submission on the Whale Trail consent application.



PARA WETLAND

This nationally significant wetland is looking excellent now native vegetation is colonising the area post willow removal. Fish & Game, through the stalwart efforts of our Marlborough based field officer, have again been active in the wetland over the past 12 months and have achieved a considerable amount of important work, including the following:

- ongoing ground control of willows
- weed releasing of native plantings when conditions allow
- two culverts have been installed in the cuttings in the levy downstream of boat point, in partnership with MDC, increasing the length of the dry weather 4wd access track by approximately 300m
- railway irons driven into place beside the faces of the two new culverts at Boat Point. This will allow flows through the culverts to be blocked off by slotting boards between the railway irons, hard up against the culvert mouths, enabling manipulation of summer water levels within parts of the wetland, if required
- aerial spot spraying of willow has been undertaken over three days, covering 45ha
- the last of the kahikatea have been planted out
- ongoing weed control has been undertaken, mainly focusing on gorse and broom along the eastern edge of the wetland and the State Highway corridor. Climbing weed vines have also been controlled on some of the native plantings



^ An aerial view of part of Para Wetland.

JULY FLOOD EVENT

The Para wetland fared pretty well during the major July flooding event (150 year return) and did not suffer significant damage. The height of the water levels within the wetland were pretty impressive with flood debris being lodged up to 3m high in the oak trees adjacent to the main channel. The MDC water level recorder tower at Boat Point was overtopped damaging the equipment.

SH1 adjacent to the wetland had to be closed during the peak of the flood after several motorists got stuck / stranded and had to be rescued. The SH1 wire roadside 'cheese grater' barriers were effective at trapping flood

debris, creating large log piles in places. The wetland southern boundary fence, out from the old weigh station, remained intact and just required some logs to be cleared along with several other access points.

Native plantings fared well with only a few being damaged, however some bankside plantings were lost due to scouring of the main channel. At least one maimai has vanished. Interestingly a hunters dinghy that is normally stored adjacent to the highway was spotted upside down out in the middle of the wetland on the western side of the main channel some 2km upstream. This demonstrates the dual hydrology of the wetland and how the Tuamarina River backflows from the Wairau River when the water level in the Wairau River rises by more than half a metre. Overall not too much damage was done considering the scale of the flood event.

HUNTING AT PARA

Hunting on opening weekend was fairly quiet at Para in terms of hunters using the area, birds flying and bags achieved. Only a dozen or so hunters were present.

On the Saturday of Opening Day, the average bag was 3-4 birds per hunter and on the Sunday this reduced to 2-3 birds per hunter.

The southern and western parts of the wetland shot the best as these retained some water over summer whilst the eastern and northern parts had dried out.

WETLAND PROMOTION

World Wetlands Day was celebrated at Para with a kayak trip with Envirohub Marlborough and Kiwi Conservation Kids. The day was fully booked with 15 children and 7 adults. Feedback from the event from was positive and another trip for those who missed out is planned. Blenheim Boys Brigade also had a guided kayak trip through the wetland.



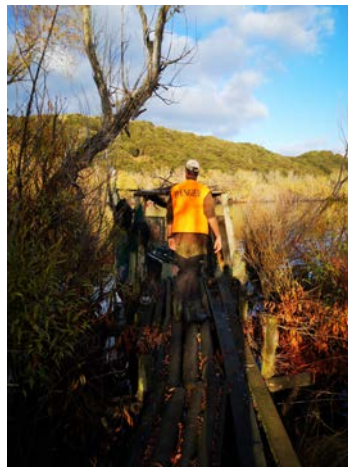
^ Kiwi Conservation Kids celebrated World Wetland Day at Para.

COMPLIANCE

Fish & Game have a target to attempt to check 10% of hunters each year. There were 984 game licences sold in this region for the 2021 season, so it is expected that at least 98 hunters would be checked over the course of the season.

OPENING DAY 2021

Compliance effort was focused in Kaikoura over opening day. Two teams of two rangers checked for hunters at locations around Kaikoura Flat, Kaikoura Lakes and the Inland Road. Hunting results were variable with not many mallards being shot but some good bags of parries were achieved.



> The 'Leg of Mutton' pond at Kaikoura had plenty of shooters in residence.

Approximately 20 licences were checked, and it was pleasing to note all hunters encountered were using steel shot, which was an improvement on the last time gamebird ranging was undertaken in Kaikoura. However it appears that some unlicensed hunting is still occurring in some locations around Kaikoura. One shotgun was seized from a hunter who claimed to be using both shotguns that were in a maimai with 4 occupants. An offence notice was issued and the matter has been dealt with using an Iwi Community Panel process.

At another location around 12 persons were found partying in a maimai after the shooting had finished for the morning and the guns had been locked away. Only two of these people admitted to having been hunting and produced licences.

To state the obvious, it appears hunter behaviour in this neck of the region is fairly poor, and at complete odds to what is occurring around the rest of the region, where compliance is high, and instances of alcohol in the maimai is very low. Fish & Game will be undertaking further compliance in this area over the coming years, and hope to see an improvement on both a compliance and hunter behaviour front.

Elsewhere, Opening Day dawned in typical top of the south fashion, and, as is the usual, mixed bags were the norm.



^ Lawson Davey about to inspect a maimai South of Kaikoura.



^ A great Opening Day setup.

COMPLIANCE TARGET

Besides Opening Day, hunter compliance was also verified at various Fish & Game organised hunts, which, combined with Opening Day checks, saw a total of 105 licences checked for the 2021 season, meeting the 10% target.



APPENDIX

PARADISE SHELDUCK TRENDS COUNT \$

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019*	2020	2021
Buler	1516	1577	2588	2568	2546	2320	2236	1959	2813	2639	3030	3061	2963	2657	2900	2235	3153	3058	2212
Tasman	3603	3898	5100	5709	5509	5588	5052	4329	4947	5476	5343	5826	6457	7398	7187	7537	6262	7154	9331
Molesworth	590	653	494	755	707	724	405	0	458	440	503	554	840	660	410	640	576	909	669
Wairau/Awaitere	3411	2525	2624	2188	2012	3111			2092	3168	3652	3718	4114	2658	2950	3510	3742	3309	4583
Kaikoura	1450	740	775	1340	1102	140			199	666	920	180	810	1625	1096	1220	1350	1495	1283
Sounds	450	372	565	630	805	330	385		516	845	600	900	480	700	370	500	800	880	780
Total	11020	9786	12148	13210	12861	12218	8078	8288	11025	13234	14048	14238	16844	16898	14813	16842	16583	18806	18568

* some ponds not counted

SWAN TRENDS COUNTS

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Farewell	13860	10321	9100	7000	5258	10691	9274	6638	4277	4707	4871	7043	10283	6403	7142	8498	8133	10211	6903
Westhaven	455	645	623	572	700	710	199	925	727	464	193	474	525	525	332	260	390	363	334
Marlborough	629	646	1280	1732	1969	2761	3586	1095	1022	2741		1207	1048	489	404	974	1071	2573	1564
Other	24	20	40	126	46	43	123	96	91	11	12	62	58	86	101	97	81	22	84
Total	14968	11632	11043	9430	7973	14205	13182	8754	6117	7923	5076	8786	11914	7503	7979	9829	9675	13169	8885

SHOVELER COUNTS - NELSON MARLBOROUGH REGION 2000-2021

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Males	111	116	122	198	155	205	169	135	143	236	82	165	257	132	71	134	181	116	176	138	290	111
Females	61	100	94	204	120	141	111	93	112	179	69	96	183	126	47	58	143	102	63	77	120	44
Unknown Sex	453	22	27	301	366	1055	851	1373	327	885	668	694	1707	2230	1615	1714	1525	1108	2213	1507	1944	1676
Total Shoveler	625	238	243	703	641	1401	1131	1601	582	1300	819	955	2147	2488	1733	1906	1849	1377	2452	1722	2354	1831
Grey Teal					957	1220	170	468	105	547	872	115	66	247	110	77	350	347	207	166	329	166

Location: Marlborough	2016	2017	2018	2019	2020	2021	
Havelock Estuary 1	44	60	22	31	78	0	↓
Havelock Estuary 2 Kaikumera	33	39	9	8	77	52	↓
Havelock Estuary 3 Km road	5	2	19	7	12	9	↓
Havelock Estuary 4 Kaituna arm	25	26	56	74	60	58	↓
Mahikipawa Wheadon Ck	17	95	7	21	48	32	↓
Mahikipawa Taylors Ck	38	20	41	6	0	4	↑
Head of Mahikipawa	28	0	28	50	25	0	↓
Okiwa Bay	0	0	34	64	14	18	↑
Ngakuta Bay	0	9	9	2	0	0	
Para Swamp honey pot	5	1	0	9	17	0	↓
Para Swamp Dbl Mgt	17	1	12	0	0	0	
Bush Rd Pond Tuamarina	18	0	3	5	17	16	↓
Yealands pond	0	43	0	22	8	23	↑
Opawa River campground	17	38	54	8	9	23	↑
Waihopai Cemetary Pon	24	26	5	44	7	18	↑
PPCS pond	30	110	33	69	44	54	↑
Old Pond	100	110	144	159	136	138	↑
New Nth Bubbler	20	0	0	47	0	0	
New Sth Bubbler	20	0	23	0	0	1	↑
Nth Pond 2b	320	330	249	201	395	228	↓
Middle Pond 2C	210	230	490	383	302	231	↓
Sth Overflow/natural ponds	50	0	0	57	0	0	
Taylor DS SH1	26	12	71	69	57	61	↑
Springlands retirement village	76	57	91	161	131	86	↓
Bothams Bend	21	15	0	11	6	14	↑
Grovetown Lagoon (Wharf Rd)	110	172	220	37	74	31	↓
Grovetown Lagoon (Cemetary)	85	13	38	34	68	18	↓
Pollard Park	140	130	128	125	157	107	↓
Wairau Diversion	31	80	25	0*	23	77	↑
Total	1510	1619	1811	1704	1765	1299	

NELSON/TASMAN/GOLDEN BAY	2015	2016	2017	2018	2019	2020	2021	
Eastons Pond		26	81	44	59	4*	20	↑
Old Wharf Rd Motueka		71	90	124	32	41	31	↓
Thorpe Street	27	36	74	42	56	86	22	↓
Staples St./Kumera's Est	85	33	58	37	11	28	32	↑
Motueka Oxidation Ponds	91	136	81	134	40	89	124	↑
Lodders Lane	33	52	20	14	20	14	49	↑
Puketawhai	39	22	82	6	56	52	26	↓
Takaka Oxidation Ponds	57	21	68	34	74	81	84	↑
Motupipi Estuary (Nees R)	79	35	19	48	34	67	25	↓
Waitapu Estuary (Wharf Rd)	9	30	46	13	32	28	0	↓
Waitapu Est (Rangihaeata Head)	91	97	42	179	164	191	44	↓
Parapara Inlet	59	9	51/49	45	68	82	15	↓
Collingwood Estuary	45	15	53	69	64	148	73	↓
Gorge Creek	0	0	35	46	14	29	42	↑
Pakawau Inlet	4	14	13	17	4	2	7	↑
Lake Killamey		45	44	21	54	52	91	↑
Marriages Rd		22	15	50	34	45	28	↓
Kainui Dam	59	45	0	37	0**	**	23	↑
Wakapuaka Oxidation	549	411	441	455	955	410	548	↑
Bells Is. Oxidation Ponds	126	113	138	256	116	157	119	↓
Aranui Rd Mapua		30	25	18	13	37	19	↓
Rabbit Island TicToc		16	40	83	44	69	0	↓
Washbourne Gardens Richmond		52	66	41	43	30	23	↓
Daelyn Pond		50	0	46	45	10	17	↑
Nelson Airport estuary		20	24	24	0*	0*	0	
Saxton Field		20	60	33	41	25	38	↑
Templemore Pond		44	75	72	60	25	20	↓
Founders Park		34	30	28	29	**	22	
Queens Gardens		90	110	115	67	73	68	↓
Pearl Creek				42	34	2	41	↑
Dredge Pond				59	12	0	0	
Awa Awa Road				6	25	3	2	↓
Stames Rd (4 pond total)						35	52	↑
Flaxmore Rd Pond						10	15	↑
Harley Rd Pond (via Tasman View Rd)						17	14	↓
Total (dotted border only)		1589	1896	2131	2229	1876	1610	

Seasonal wetness/Breeding success (6 points Spring + 4 points summer)

- 1 drought conditions, low breeding success
 - 5 normal conditions, average breeding success
 - 10 excessive wet, excellent breeding success
- (2016 would have rated 8)
(2015 would have rated 2)

GHS/MDD results (5 points)

- 1 significant reduction in harvest
- 2 some reduction in harvest
- 2.5 no significant change
- 4 some increase in harvest
- 5 significant increase in harvest

Mallard monitoring (5 points)

- 1 30%+ reduction
- 2 10-30% reduction
- 2.5 no significant change
- 3 10-20% increase
- 4 20-40% increase
- 5 40%+ increase

(2017 would have rated 3 due to a ~13% increase)

Total 20 points

- < 8 points – consider dropping limit
- 8-12 points – no change
- >13 points – consider raising the limit