UPDATE on illegal bird trapping activity in Cyprus

Covering the autumn 2020 findings of BirdLife Cyprus' continuing monitoring programme for illegal bird trapping in Cyprus and providing an overview of the latest developments regarding the problem

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Contents

Περίληψη

Τα αποτελέσματα του προγράμματος συστηματικής παρακολούθησης για την περίοδο παγίδευσης του φθινοπώρου 2020 υπογραμμίζουν τη συνεχιζόμενη πρόοδο στις περιοχές εντός της επικράτειας των Βρετανικών Βάσεων, καθώς και τη σημαντική μείωση των επιπέδων παγίδευσης με δίχτυα εντός της Κυπριακής Δημοκρατίας. Δυστυχώς, αυτή η θετική πρόοδος στο πεδίο έρχεται σε πλήρη αντίθεση με τις πολιτικές εξελίξεις. Η Βουλή των Αντιπροσώπων έχει εγκρίνει σοβαρές χαλαρώσεις στον νόμο περί προστασίας των αγρίων πουλιών, με τις πιο πρόσφατες να υπερψηφίζονται τον Δεκέμβριο του 2020.

Το συστηματικό πρόγραμμα παρακολούθησης του BirdLife Cyprus καλύπτει μια περιοχή έρευνας η οποία περιλαμβάνει δύο δικαιοδοσίες: την Κυπριακή Δημοκρατία και τις Βρετανικές Βάσεις (SBA) Δεκέλειας. Συγκεκριμένα, καλύπτει τις περιοχές Λάρνακας - Αμμοχώστου και Αγίου Θεοδώρου – Μαρώνι. Με βάση την ανάλυση των στοιχείων της έρευνας, εκτιμούμε ότι κατά τη διάρκεια του φθινοπώρου του 2020 υπήρχαν 2,800 μέτρα ενεργών διαδρομών με δίχτυα εντός της περιοχής έρευνας. Με αυτά τα δεδομένα, εκτιμάται ότι μπορεί να θανατώθηκαν περίπου 294.000 πουλιά εντός της περιοχής έρευνας.

Συνολικά, η χρήση διχτύων εντός της περιοχής έρευνας για το φθινόπωρο 2020 ήταν κατά 94% χαμηλότερη σε σύγκριση με τα επίπεδα του 2002 (όταν ξεκίνησε το πρόγραμμα παρακολούθησης του BirdLife Cyprus) σύμφωνα με την ανάλυση που έγινε στο πρόγραμμα TRIM. Πρόκειται για μια θετική εξέλιξη, καθώς **αυτά είναι τα χαμηλότερα επίπεδα παγίδευσης με δίχτυα που έχουν καταγραφεί από την αρχή του προγράμματος παρακολούθησης.** Σε επίπεδο επικράτειας, το φθινόπωρο 2020 καταγραφήκαν τα χαμηλότερα επίπεδα παγίδευσης με δίχτυα στις περιοχές των Βρετανικών Βάσεων από το 2002, όταν ξεκίνησε η έρευνα. Πρόκειται για μια μεγάλη πρόοδο, δεδομένου ότι μόλις πριν από τέσσερα χρόνια, το 2016, το BirdLife Cyprus κατέγραψε τα υψηλότερα επίπεδα παγίδευσης εντός των Βρετανικών Βάσεων. Όσο για τα επίπεδα παγίδευσης στις περιοχές της Κυπριακής Δημοκρατίας, αυτά παρουσίασαν μείωση, ακόμη μια θετική εξέλιξη που “επανορθώνει” για την αύξηση που σημειώθηκε τα προηγούμενα δύο χρόνια.

Περαιτέρω επιτυχία σημειώθηκε τον Νοέμβριο του 2020, όταν η Αστυνομία Κύπρου πραγματοποίησε επιχείρηση σε έναν γνωστό σημείο παγίδευσης οργανωμένου κυκλώματος παγιδευτών στην επαρχία Λάρνακας, μετά από συντονισμό με την Υπηρεσία Θήρας και Πανίδας. Συνολικά, βρέθηκαν πέντε δίχτυα, πέντε ηχομιμητικές συσκευές και 366 πουλιά σε τρεις διαφορετικές τοποθεσίες, με αποτέλεσμα να εκδοθεί συνολικό πρόστιμο 11.600 ευρώ σε τρία άτομα. Τονίζεται όμως ότι αυτή η επιχείρηση πραγματοποιήθηκε στο τέλος της περιόδου παγίδευσης, μετά από πολλαπλές καταγγελίες του BirdLife Cyprus και των CABS στις αρμόδιες αρχές. Έχει καταστεί σαφές ότι η διάλυση του Ουλαμού Πάταξης Λαθροθηρίας της Αστυνομίας τον Νοέμβριο του 2019 έχει δημιουργήσει ένα μεγάλο κενό στην επιβολή του νόμου κατά των μεγάλων, οργανωμένων παγιδευτών. Οι ενέργειες επιβολής του νόμου στους μεγάλους και οργανωμένους παγιδευτές πρέπει να είναι συνεπείς και πιο συχνές, και πρέπει να γίνονται νωρίς μέσα στην περίοδο παγίδευσης.

Ωστόσο, η θετική μείωση στην παγίδευση με δίχτυα που καταγράφηκε έρχεται σε πλήρη αντίφαση με τις αρνητικές εξελίξεις στο πολιτικό επίπεδο των τελευταίων ετών. Τον περασμένο Δεκέμβριο, η Βουλή ψήφισε διάφορες τροποποιήσεις του νόμου «Περί Προστασίας και Διαχείρισης Αγρίων Πτηνών και

Θηραμάτων Νόμος». Μία από αυτές τις τροπολογίες ήταν η εισήγηση να μειωθεί το πρόστιμο για το παράνομο κυνήγι και την παράνομη παγίδευση με ξόβεργα για έως και 50 πουλιά από μια λίστα 14 ειδών, από 2000 ευρώ σε 200 ευρώ. Αυτή η λίστα των 14 ειδών περιλαμβάνει είδη που παγιδεύονται, κάτι που το BirdLife Cyprus δεν θεωρεί τυχαίο. Πιστεύουμε ότι πρόκειται για μια ξεκάθαρη χαλάρωση του νόμου και ουσιαστικά αποποινικοποιεί τη θήρευση και την παγίδευση αυτών των 14 ειδών, αφού έχει δημιουργηθεί μια «λιγότερο προστατευμένη» ξεχωριστή κατηγορία για αυτά τα είδη. Τα πρόστιμα ή οι ποινικές κυρώσεις γενικά πρέπει να είναι αποτελεσματικές, αναλογικές και αποτρεπτικές, όπως αναφέρεται και στην Οδηγία για το Περιβαλλοντικό Έγκλημα (2008/99/ΕΚ). Επομένως, αδυνατούμε να αντιληφθούμε πώς τέτοια χαμηλά πρόστιμα θα εξυπηρετήσουν αυτό τον σκοπό, δηλαδή να αποτρέπουν τους παραβάτες από το να θανατώνουν παράνομα προστατευόμενα είδη.

Η παράλογη αυτή τροποποίηση του νόμου είναι ακόμη πιο εμφανής όταν συγκρίνουμε με τα πρόστιμα για αδικήματα σε σχέση με θηρεύσιμα είδη, τα οποία διατηρήθηκαν υψηλά και αποτρεπτικά στα 2000 ευρώ. Θεωρούμε ότι η δημιουργία αυτής της υποκατηγορίας «λιγότερο προστατευμένων» ειδών αποτελεί ένα μεγάλο πισωγύρισμα σχετικά με την προστασία των πτηνών στην Κύπρο. Επίσης δεν είναι πρακτικά εφαρμόσιμη στο πεδίο, αφού πολλά από τα 14 είδη που συμπεριλήφθηκαν στη λίστα μοιάζουν με άλλα είδη που δεν έχουν συμπεριληφθεί. Στην πράξη, ενθαρρύνεται έμμεσα η παράνομη θήρευση πτηνών, με ορατό τον κίνδυνο επιδείνωσης του φαινομένου μέσα στα επόμενα χρόνια. Ήδη τους τελευταίους μήνες το BirdLife Cyprus έχει καταγγείλει στις αρχές διάφορα περιστατικά που σχετίζονται με τον παράνομο πυροβολισμό μεταναστευτικών πτηνών, συμπεριλαμβανομένου και ενός περιστατικού εκτεταμένης θανάτωσης δεκάδων μελισσοφάγων τον περασμένο Οκτώβριο, σε μια περιοχή καθημερινού κυνηγιού στην Επαρχία Λάρνακας.

Παρόλο που το πρόγραμμα παρακολούθησης του BirdLife Cyprus επικεντρώνεται κυρίως στη δραστηριότητα της παράνομης παγίδευσης με δίχτυα, το φθινόπωρο του 2020 η ομάδα πεδίου εντόπισε αυξημένη παγίδευση με ξόβεργα, τόσο στον συνολικό αριθμό ξοβέργων όσο και στα σημεία παγίδευσης με ξόβεργα. Την ίδια αύξηση εντόπισε και η οργάνωση CABS. Αυτή η αύξηση στη χρήση ξοβέργων φαίνεται να υποστηρίζεται και από τα στοιχεία πάταξης της Υπηρεσίας Θήρας και Πανίδας, τα οποία δείχνουν ότι κατασχέθηκαν διπλάσια ξόβεργα το φθινόπωρο 2020 σε σύγκριση με το φθινόπωρο 2019. Πιστεύουμε ότι αυτή η αύξηση συνδέεται με τα πολύ χαμηλότερα πρόστιμα των 200 ευρώ για το αδίκημα της παγίδευσης με ξόβεργα, τα οποία δεν είναι αποτρεπτικά για τους παραβάτες σε σύγκριση με άλλα αδικήματα.

Τα εξώδικα πρόστιμα συνέχισαν να εκδίδονται από την Υπηρεσία Θήρας και Πανίδας, και τα δεδομένα συνεχίζουν να δείχνουν ότι, κατά μέσο όρο, τα χαμηλότερα πρόστιμα (έως και 5000 ευρώ), πληρώνονται από τους παραβάτες, ωστόσο τα μεγαλύτερα πρόστιμα παραμένουν απλήρωτα. Οι παραβάτες που δεν πληρώνουν τα πρόστιμά τους παραπέμπονται στο δικαστήριο όπου φαίνεται ότι οι δικαστές, γενικά, μειώνουν τα πρόστιμα κατά 60%, περίπου 1900 ευρώ κατά μέσο όρο.

Καταληκτικά το BirdLife Cyprus καλεί τις αρχές να λάβουν υπόψη τα εξής:

1. Η Βουλή να επανεξετάσει τις τροποποιήσεις του νόμου «Περί Προστασίας και Διαχείρισης Αγρίων Πτηνών και Θηραμάτων Νόμος» και να επαναφέρει το πρόστιμο για τα αδικήματα κατοχής και χρήσης ξοβέργων και του κυνηγίου των 14 προστατευμένων, μη θηρεύσιμων ειδών από τα 200 στα 2000 ευρώ.

2. Οι αρμόδιες αρχές της Κυπριακής Δημοκρατίας να ενισχύσουν τη συνεργασία με περιβαλλοντικές ΜΚΟ, υιοθετώντας παρόμοια προσέγγιση με αυτή της Αστυνομίας των Βρετανικών Βάσεων, προκειμένου να καταστεί πιο αποτελεσματική η πάταξη στο πεδίο.

3. Η Υπηρεσία Θήρας και Πανίδας να καταρτίσει ένα σχέδιο δράσης με έμφαση στους μεγάλους, οργανωμένους παγιδευτές και να ζητήσει την στήριξη της κυπριακής αστυνομίας για την εφαρμογή του. Επιπλέον, οι Κυπριακές αρχές πρέπει να αυξήσουν την πάταξη κατά των εστιατορίων που παράνομα σερβίρουν αμπελοπούλια (για αντιμετώπιση της ζήτησης).

4. Να γίνει ενημέρωση στο δικαστικό σώμα (δικαστές, κατήγορους) σχετικά με την εξώδικη ρύθμιση και ότι η παράνομη παγίδευση πουλιών αποτελεί σοβαρό έγκλημα κατά της άγριας ζωής, προκειμένου να αντιμετωπιστεί η μεγάλη διαφορά που παρατηρείται μεταξύ των εξώδικων που εκδίδονται και των δικαστικών ποινών που τελικά επιβάλλονται. Θεωρούμε ότι η Υπηρεσία Θήρας και Πανίδας, ως αρμόδια αρχή για την εφαρμογή της νομοθεσίας για τα πτηνά, είναι η πιο κατάλληλη για την υλοποίηση αυτής της δράσης.

5. Η Διοίκηση των Βρετανικών Βάσεων να συνεχίσει την προσέγγιση συνεργασίας με περιβαλλοντικές ΜΚΟ, και την εφαρμογή και την αναθεώρηση του σχεδίου δράσης της.

6. Η Διοίκηση των Βρετανικών Βάσεων να εκπονήσει σχέδιο διαχείρισης του οικότοπου της περιοχής του Κάβο Πύλα για τη μακροπρόθεσμη εξάλειψη της επεμβατικής ακακίας και να ξεκινήσει εκ νέου το πρόγραμμα αφαίρεσης ακακίας.

Η αναφορά χωρίζεται στα ακόλουθα κεφάλαια:

- Το κεφάλαιο 0 παρουσιάζει μια σύνοψη της παγίδευσης πουλιών στην Κύπρο, δίνει μια ιστορική αναδρομή αυτής της δραστηριότητας, κάνει αναφορά στην εθνική νομοθεσία όσον αφορά την προστασία των πτηνών και παρουσιάζει την τρέχουσα κατάσταση,

- Το κεφάλαιο 2 παρουσιάζει το πρόγραμμα παρακολούθησης του BirdLife Cyprus,

- Το κεφάλαιο 3 παρουσιάζει τα αποτελέσματα της έρευνας πεδίου και την ανάλυση από το πρόγραμμα TRIM, τα στοιχεία από τις προσπάθειες πάταξης των αρμοδίων αρχών και το πολιτικό και κοινωνικό κλίμα που επικρατεί, και,

- Το κεφάλαιο 0 είναι η συζήτηση και εισηγήσεις, όπου γίνεται μια σύνοψη της κατάστασης της παράνομης παγίδευσης πουλιών, ενώ επίσης γίνονται συστάσεις προς την Κυπριακή Κυβέρνηση και τη Διοίκηση των Βρετανικών Βάσεων.

Τα έξοδα για την εργασία πεδίου του BirdLife Cyprus (καύσιμα), καθώς και τα έξοδα των εκάστοτε εθελοντών, καλύφτηκαν από την οργάνωση NABU (BirdLife στη Γερμανία), ενώ το RSPB (BirdLife στο Ηνωμένο Βασίλειο) κάλυψε τους μισθούς.

Summary

The results of the systematic monitoring programme for the autumn 2020 trapping season highlight further success in the Sovereign Base Areas, as well as a substantial reduction in trapping with mist nets within the Republic of Cyprus. This positive progress on the ground over the last few years is in complete contrast to the political developments that have taken place. Dangerous relaxations of the hunting law have been passed by the Cyprus Parliament, the most recent and most scandalous of which was voted in December 2020.

The systematic monitoring programme is based upon a survey area that encompasses two jurisdictional areas: the Republic of Cyprus and the UK territory of Dhekelia SBA. It specifically covers the Larnaka - Famagusta and the Ayios Theodoros – Maroni areas. Based on analysis of the survey data, we estimate that about 2,800m of mist net rides were active during the autumn of 2020 within the survey area. This is still significant trapping activity and suggests that an estimated 294,000 birds may have been killed within the survey area over the autumn. Overall, mist netting activity for autumn 2020 was 94% lower compared to the 2002 (baseline) levels within the survey area (based on analysis using the TRIM model). **These are the lowest ever recorded trapping levels since the start of the programme in 2002, a very positive result**. On a jurisdiction level, this year saw the lowest levels of recorded mist net trapping in the SBA areas since 2002, when the survey began. This is great progress especially considering that just four years ago, in 2016, Birdlife Cyprus recorded the highest ever levels of trapping, in the SBA areas. Trapping activity levels within the Republic of Cyprus areas also showed a decrease, which is also very positive news, and improves on the previous two years of increase.

Further significant success was noted in November 2020, when the Cyprus Police raided a well-known trapping site in Larnaka district, after coordination with the Game & Fauna Service. Five mist nets, five calling devices, and 366 birds were found at three different locations, resulting in total fines of €11,600 for three people. However, this raid occurred at the end of the trapping season, and only after Birdlife Cyprus and CABS had reported the illegal activity on numerous occasions, to the competent authorities. It has become clear that the dismantlement of the Cyprus Police Anti-poaching unit in November 2019 has created a major gap on enforcement against the big, organized trappers. Enforcement action targeting the big organized trappers needs to be consistent and more frequent, with operations of this scale taking place early in the trapping season.

However, the positive reduction in trapping activity with mist nets recorded on the ground is in stark contrast to negative developments at the political level in recent years. There was further dangerous backsliding in recent months. Last December 2020 the Cyprus Parliament voted for amendments to the "Protection and Management of Wild Birds and Game Species law". One of these amendments was to reduce the on-the-spot fine for the illegal shooting and trapping with limesticks for up to 50 birds from a list of 14 species, from €2000 to €200. It just so happens that these 14 species are the target ones for the "ambelopoulia" songbird dish. This is a clear relaxation of the law, and it essentially decriminalizes the shooting and trapping of these 14 species, since it has created a 'less protected', much lower fine separate category for these target species. We believe that fines or any criminal sanctions in general need to demonstrate and ensure that they are effective, proportionate and dissuasive, as stated also in the Environmental Crime Directive (2008/99/EC). We fail to understand how such low fines for songbird trapping and shooting will be deterrent towards the lawbreakers.

The absurdity of this law change is even more evident when one realizes that the fines for offences in relation to game species have been kept high and deterrent, at €2000. We consider that the creation of this 'less protected' category is a major setback for bird protection in Cyprus. In addition, it is not enforceable in practice, as species on this list are very similar to species not on the list. In practice it indirectly encourages the illegal killing of songbirds and Birdlife Cyprus believes it will increase this phenomenon on the island over coming years. In the past few months, BirdLife Cyprus has witnessed and reported to the authorities a numbers of incidents relating to the illegal shooting of migratory birds, including the illegal shooting of tens of bee-eaters last October 2020 at a hunting area in the Larnaca district.

Even though the Birdlife Cyprus methodology is mainly focused on mist netting activity, during autumn 2020 we recorded an increase in limestick trapping, both in terms of total number of limesticks found set and also in terms of sites found active for limestick trapping. This was noted by CABS field observations too. This increase in limestick use seems to be supported by the Game and Fauna Service data, which show that twice as many limesticks were confiscated in autumn 2020 compared to autumn 2019. We believe this is linked to the much lower fines of 200 euros for limestick trapping, which are not a deterrent to trappers.

On-the-spot fines have continued to be issued by the Game and Fauna Service, and the data continue to show that, on average, lower fines (of up to 5000 euro) are being paid by offenders. However, larger fines often remain unpaid. These offenders who fail to pay their fines are taken to court, where it appears that the judges generally reduce the fines by around 60% (to an average of 1900 euro).

Birdlife Cyprus calls upon the Government of Cyprus, and the SBA Administration to implement the following recommendations:

1) The Cyprus Parliament to revisit the amendments to the "Protection and Management of Wild Birds and Game Species law" and to restore the fines for limestick possession and use, as well as hunting of 14 specific protected species from 200 to 2000 euro.
2) The Cyprus competent authorities to strengthen the collaboration with environmental NGOs on the ground, adopting a similar approach to that taken by the SBA Police, in order to make enforcement action more effective.
3) The Game and Fauna Service needs to draw up an action plan with a focus on the big, organized trappers with the support of the Cyprus police, for its implementation. Furthermore, the Cyprus authorities need to undertake increased and consistent enforcement action against law-breaking restaurants serving illegal ampelopoulia "delicacies" (to address demand).
4) Training to be provided to the Judiciary and Prosecutors regarding the on-the-spot fine system and that illegal bird trapping is a serious wildlife crime, in order to address the large discrepancy observed between on-the-spot fines issued and court sentences handed out. We consider that the Game and Fauna Service, as the responsible authority for the implementation of the Birds legislation, is best placed to do this.
5) The SBA Administration to continue with the collaborative partnership approach adopted with environmental NGOs and the implementation and review of its action plan.

6) The SBA Administration to move to draw up a habitat management plan for the long-term eradication of invasive acacia on Cape Pyla, in line with the responsibilities to manage the SAC (Special Area of Conservation), and to restart the acacia removal programme.

The report is separated into the following sections:

- Section 0 provides an overview of the bird trapping in Cyprus, gives some historical background to this activity, makes reference to the national legislation regarding bird protection and presents the current situation,
- Section 2 describes the historical outline of the surveillance programme of BirdLife Cyprus,
- Section 3 presents the survey data from the monitoring programme and the analysis from the TRIM software, summarises the enforcement data of the competent authorities and gives an outline of the political and social attitudes regarding this issue, and
- Section 0 is the discussion, giving an overview of the illegal bird trapping situation, while also providing recommendations to the Cyprus Government and the SBA Administration.

All the running costs for the field work (car fuel), as well as all the volunteer costs were covered by NABU (BirdLife in Germany), while the RSPB (BirdLife in UK) covered salaries.

1. Overview of bird trapping in Cyprus

Trapping with non-selective methods (mist nets and limesticks) and the trade of wild birds have been prohibited since 1974 under Cyprus legislate on, when the law 'Protection and Development of Game and Wild Birds Law of 1974 (39/1974)' was introduced[1]. Moreover, in 1988 Cyprus ratified the 1979 Bern Convention on the Conservation of European Wildlife and Natural Habitats, adopting a long list of birds as protected, including the Blackcap (*Sylvia atricapilla),* hence prohibiting the killing (hunting) and consumption of Blackcaps (Blackcaps are the main target species of illegal bird trapping in autumn in Cyprus). With Cyprus joining the EU, the EU Birds Directive (2009/147/EC, formerly 79/409/EEC) was transposed into Cyprus Law N. 152(I)/2003, prohibiting anew the use of non-selective methods including mist nets, limesticks and calling devices, as well as the possession of trapping equipment, trapped birds and the trading and eating of trapped birds.

Historically, trapped birds – mostly Blackcaps - were a food supplement for the mostly poor island inhabitants living off the land. The practice of bird trapping in Cyprus has been recorded in historical documents from the Middle Ages and even earlier times. However, trapping as practiced in Cyprus today bears no relation to historical 'tradition'.

Nowadays, bird trapping in Cyprus is widespread and extensive, contributing to the large scale killing of hundreds of thousands of migratory and wintering birds. Survey records show that 157 bird species have been found trapped in mist nets or on limesticks, of which 82 are listed as conservation priority species under the EU Birds Directive and/or by BirdLife International[2]. This is a clear indication of the non-selective nature of these methods. This illegal activity has become a profitable business, which is controlled to a large extent by the 'big' trappers who are also involved in organised crime. The Cyprus Game & Fauna Service estimated this illegal business to be valued in the order of 15 million euros per year[3].

Apart from the extensive use of non-selective methods for illegal bird trapping in Cyprus, organised trappers nowadays use illegal electronic calling devices that imitate the calls of migratory birds (song playback). These calling devices are normally operated during night-time, luring the birds into the trapping sites and hence increasing the illegal catch. A recent academic study undertaken in Cyprus has shown that the use of electronic calling devices is highly effective in luring birds towards trapping sites (Sebastianelli M. *et al*, 2020[4]). The findings of this study showed that playback not only increased the number of individuals of target species captured by around 11 times, but also significantly increased bycatch. The study authors concluded that: '*Our findings thus show that in contrast to popular belief that tape lures are a selective trapping method, they also lead to increased captures of non-target species, which can include species of conservation concern*'.

[1] The specific articles of Law 39/1974 that prohibited the trapping and trade of wild birds include: Article 10 ('prohibition of hunting etc. of certain bird species', without including the blackcap either in the protected or the game species), Article 14 ('prohibition of offering game or wild birds in restaurants etc.') and Article 15 ('prohibition of the use of light projectors, traps, luring methods, limesticks and flushing of birds).
[2] BirdLife Cyprus 'List of birds recorded trapped in mist nets and on limesticks' found here.
[3] Game and Fauna Service (17th March 2010), Position paper presented at the Committee of Environment of the Cyprus House of Parliament during a discussion to change the legislation on the protection and management of wild birds and game species
[4] The study can be found here

These calling devices can often be heard easily from hundreds of metres away from trapping sites during the night, highlighting the extensive use of calling devices and their intensity within the trapping areas.

This report presents the latest survey results for the 2020 autumn season, when trappers target migratory birds, and especially Blackcaps and other migrant songbirds. Trapped birds are either served as expensive *ambelopoulia* 'delicacies' in local restaurants or are sold and used for home consumption.

2. Surveillance programme of BirdLife Cyprus

BirdLife Cyprus is a non-profit NGO working for the protection and conservation of birds, their habitats and wider biodiversity, and is the partner of BirdLife International in Cyprus. With support from the RSPB (BirdLife partner in the UK), BirdLife Cyprus has undertaken a systematic surveillance programme of illegal bird trapping in Cyprus since autumn 2002, providing a long record of trapping activity and giving the NGO a very good measure of expertise on the issue. The surveillance programme follows a 'Bird Trapping Monitoring Protocol' that was developed by BirdLife Cyprus and the RSPB, in consultation with the Game and Fauna Service (GFS) and Sovereign Base Area (SBA) police at the start of the programme. Figure 1 shows the main areas of bird trapping; monitoring is concentrated in the two areas (numbered 1 and 2) where extensive trapping takes place:

1. Kokkinochoria area (Eastern Larnaca/Famagusta area) – this area also includes the Dhekelia Eastern Sovereign Base (ESBA) area), and

2. Ayios Theodoros and Maroni area (Western Larnaca).

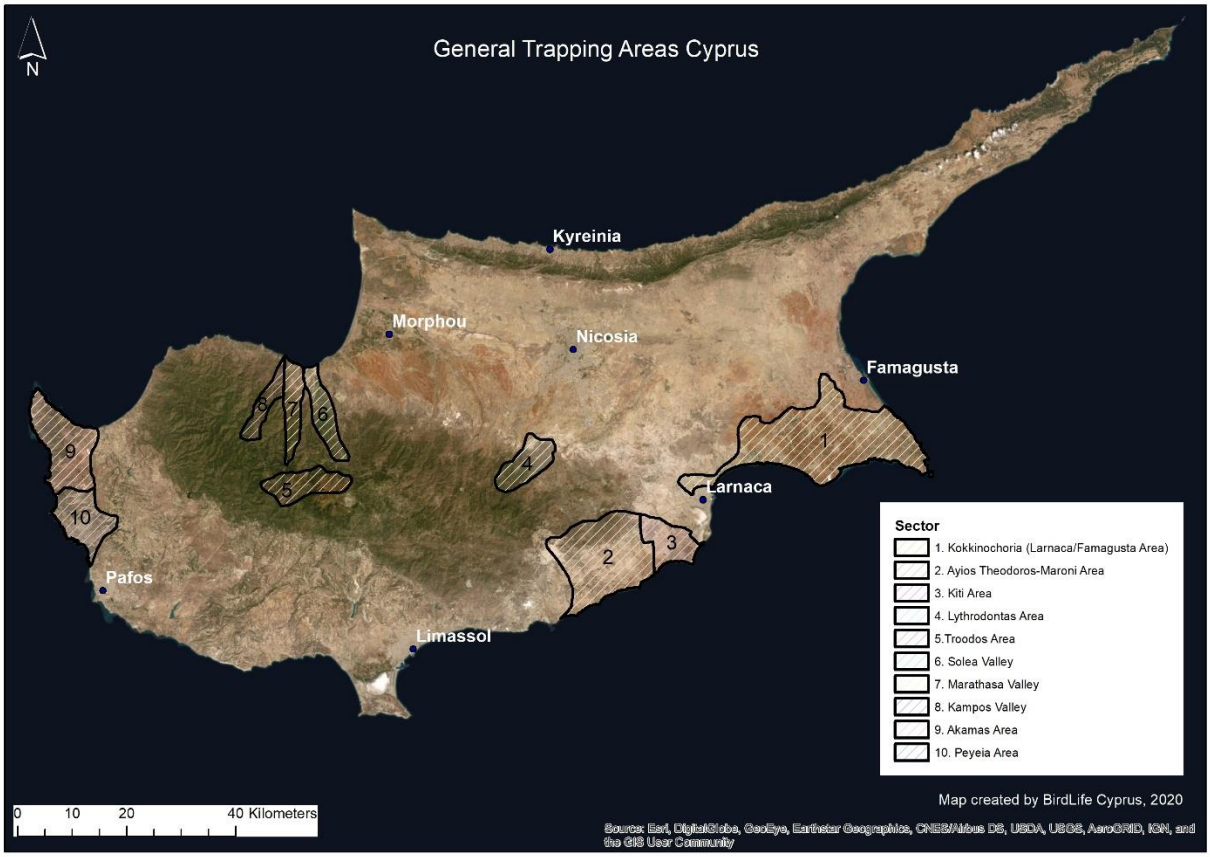


Figure 1: Map of Cyprus showing the main trapping areas

Although trapping is also an issue in other areas of Cyprus, the survey efforts focus on these two main areas due to resource limitations and because they hold the highest trapping activity. The monitoring is undertaken by visiting a random selection of sample squares (1 km^2) during daytime hours, with a focus on detecting mist netting activity. Limesticks are recorded if they are found while searching for mist nets. The squares selected are stratified to ensure a representative coverage of areas under SBA

administration and the Republic of Cyprus. For more details on the methodology of BirdLife Cyprus see Appendix 1.

The project is undertaken in close co-operation with the Game & Fauna Service and the SBA Police. When trapping paraphernalia is detected, the BirdLife Cyprus team contacts the relevant enforcement authorities. It should be noted that the BirdLife Cyprus observers never confront suspected trappers and never remove trapping paraphernalia.

BirdLife Cyprus would like to express its particular thanks to the RSPB for supporting the project financially since its inception in 2002 and for covering relevant salaries of staff members. Furthermore, BirdLife Cyprus would like to thank NABU (BirdLife in Germany) for their financial support from 2013 and for covering the running costs and volunteer costs of the surveillance programme.

Regarding the analysis of the field data, BirdLife Cyprus uses the TRIM (TRends & Indices for Monitoring data) program for trend analysis. The organisation has been gathering field data in a systematic manner since 2002 as part of its surveillance programme, which makes it possible to use such programs for the analysis.

TRIM is a program for the analysis of time series of counts with 'missing' observations. The program can be used to estimate indices and trends and to assess the effects of covariates on these indices and trends. TRIM analyses time series of counts, using Poisson regression and produces estimates of yearly indices and trends (Panneloek & van Strien 2005). If observations are missing, TRIM estimates the missing values on the basis of changes observed on plots that were monitored.

In other words, TRIM enables us to use the data from all the trapping survey squares ever surveyed under the BirdLife Cyprus surveillance programme during the autumn period, in total 185 squares, even though these squares were not all covered every autumn season. The programme 'fills in' missing values for squares that were not covered in a particular year on the basis of the general trend derived from the data as a whole. The TRIM software (freely available from here) is very widely used for analysis of field data from ecological or biological studies. It works as an index, setting the first year of a time series of data (in this case year 2002) the value of 100 and then showing changes up or down in subsequent years relative to this value of 100.

3. Results

Survey results and data analysis

Field survey data

The field survey for autumn 2020 was carried out in September and October 2020 following the standard survey protocol. In total, 60 squares were surveyed during this period and BirdLife Cyprus reported all trapping finds to the relevant enforcement authorities, either the SBA Police Anti-Poaching Unit or the Game & Fauna Service, depending on the location of the finds. Additional squares within the SBA area have been added to the sample since 2015, following the July 2015 workshop recommendation of independent science expert Alison Johnston (British Trust for Ornithology - BTO), to improve the precision of the trend within the SBA over time. Moreover, the survey area was expanded during autumn 2018 to cover the Ayios Nikolaos Garrison area of the Dhekelia SBA, where high levels of trapping activity have been recorded in the previous years. This survey area expansion arrived at after consultation with Simon Wotton, RSPB science expert, in order to ensure that the robustness of the methodology is maintained.

A summary of the survey data for autumn 2020 is presented in Appendix 2. In total, the field team recorded 23 active net rides (these are cleared "runs" in acacia plantations or other habitats e.g. orchards, olive trees, either holding nets or where there was clear evidence of preparation for the setting and/or use of nets), which sum up to a length of 410 metres of net rides used for mist netting. Six mist nets found *in situ* (either classified as Active Set Nets or Active Unset Nets[5]). **The total length of active mist net rides** within the 405 km^2 survey area (Larnaka - Famagusta and Ayios Theodoros – Maroni areas) can be extrapolated to 2,768m (410m x 405/ 60)[6].

In terms of limesticks, BirdLife Cyprus detected 86 limesticks in the autumn of 2020 (see Appendix 2). However, as already explained, BirdLife Cyprus does not focus its field survey effort on the detection of limesticks, as other organisations do. For example, during the autumn 2020 camp of the Committee Against Bird Slaughter (CABS / SPA Foundation), which took place from 30th August to 15th November, a total of 1,987 limesticks, 50 mist nets and 36 electronic bird callers were detected and/or seized[7]. It is important to highlight that the majority of the limesticks detected by CABS / SPA Foundation were in areas controlled by the Republic of Cyprus, indicating that limestick use is still widespread and remains a problem that the enforcement agencies need to address effectively and with zero tolerance.

[5] Active Set Net (ASN) is a net ride where the mist net is *in situ* and is set and ready for catching birds. Active Unset Net (AUN) is a net ride where the mist net is *in situ* but is furled i.e. the mist net is not stretched up for catching birds but lowered down.

[6] There are 405, 1 km^2 squares within the survey area that are classified as suitable for trapping activity (on the basis of vegetation characteristics) and 60 of these squares were surveyed in Autumn 2020. Out of these 405, 1 km^2 squares, 291 squares are found in the Republic areas, 83 are found in the Dhekelia SBA and 31 squares are in "Joint" areas. Those areas are either joint between SBA and Republic, SBA and buffer zone, or SBA, Republic, and Buffer zone.

[7] Information received from CABS on 3/2/21

Based on the data gathered in the field this autumn, BirdLife Cyprus estimates that just under 300,000 **birds could have been killed within the survey area** and just over 390,000 birds could have been killed across the island of Cyprus[8] (read Appendix 3 for more details).

If one were to split the potential death toll estimate (300,000 birds) between jurisdictions within the survey area based on the trapping activity detected, then just under 200,000 birds would be the potential number killed in the Republic and just under 80,000 the potential number killed in the Dhekelia SBA[9]. The 'joint' squares are not included in these death estimates at the jurisdiction level. Note however, that the limestick toll is not fully accounted for in this estimate (as the methodology of BirdLife Cyprus focuses more on detecting mist netting activity), which would make the potential kill estimate higher, especially in the Republic. The total estimate of birds killed is derived using field-gathered data in combination with expert judgement for some variables (such as the number of birds caught per net) that are too dangerous to measure in the field.

Trends in autumn mist netting activity

The TRIM program was used to analyse the survey data and to produce trends in autumn bird trapping from 2002 to 2020. The metres of net rides that are recorded as active[10] for bird trapping with mist nets within each survey square are used as the response variable, with autocorrelation and over dispersion accounted for as well. The TRIM changepoint model is used with a changepoint in every year, which returns the same result as a fully time-dependent model[11] (for more details on TRIM approaches read Appendix 4). The TRIM program is a good way of analysing these data and will produce a model of the change in bird trapping activity (with mist nets) between a base year (i.e. 2002) and each subsequent year of sampling.

A key conclusion from the BTO assessment report on the monitoring methodology of BirdLife Cyprus[Error! Bookmark not defined.] is regarding possible observer bias deriving from how net rides are classified by different observers: '*It is important to note that even if there are some differences in how certain rides would be categorised by different observers, the trend relies on consistency over time. For this reason, even if there are differences in categorisation between observers, providing that the same observer consistently applies the criteria for classifying rides over time, the trend for illegal bird trapping activity will not be compromised*'. For more details on net categorisation read Appendix 1.

It is also noted that the BirdLife Cyprus monitoring methodology is different from the non-systematic field surveys undertaken by other organisations such as CABS, which are targeted at known trapping areas and are not controlled and consistent regarding the survey effort. Therefore, the findings and results of the two surveys are not directly comparable. But both surveys provide invaluable field data

[8] The estimate does not include any illegal bird trapping possibly taking place in the Turkish occupied parts of Cyprus.

[9] From the 410 metres of active net rides detected within the survey area, 226 metres were in the Republic of Cyprus (from the 37 squares surveyed), 184 metres were in the SBAs (from the 20 squares surveyed). For the calculated death estimates at a jurisdiction level, the trapping finds (excluding the 'Prepared' rides) in each jurisdiction are extrapolated to the total number of squares that are classified as suitable for trapping activity (see footnote 6 above).

[10] This includes all 4 categories of net ride classification: P – Prepared, ANN – Active No Net, AUN – Active Unset Net and ASN – Active Set Net. Read Appendix 1 for details on net ride classification.

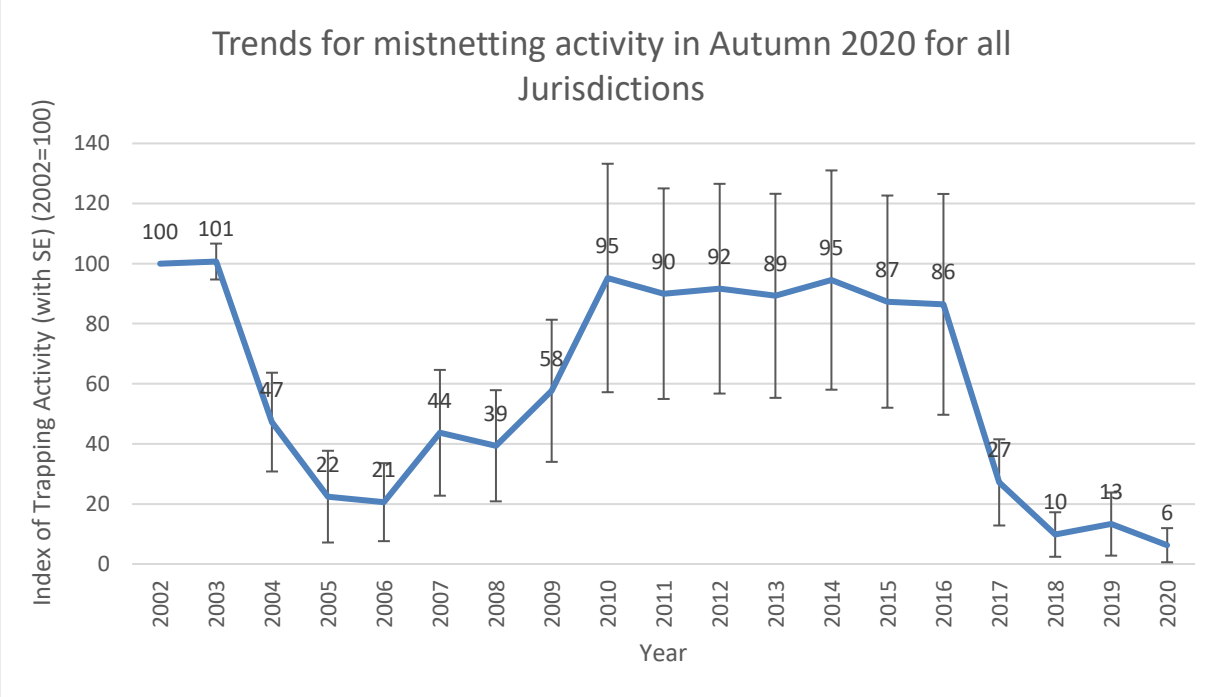
[11] This is a linear trend model using the stepwise approach and with all years selected as changepoints.

and are supportive and complementary to each other, provided the differences in methodology are taken into account.

Figure 2 shows the trapping activity levels since 2002 across a sample size of 185 squares within the survey area, with standard error margins. Additional square coverage has been included in the last few years, particularly within the SBA, following a recommendation in the BTO assessment report (July 2015)[Error! Bookmark not defined.] to increase the sample size within this stratum. In keeping with our standard m ethodology, a stratified random sample of 60 of the 185 squares was surveyed in autumn 2020.

It is important to highlight that the additional squares surveyed have slightly expanded the total square coverage to 185 (185 in 2019 also, 157 squares in 2018, 129 squares in 2017 and 104 squares in previous years), hence the TRIM program has imputed missing values for these extra squares as well. As a result, if one were to compare the index values presented in Figure 2 below with the trend analysis results reported in the previous autumn trapping reports[12], the index values may vary slightly for the previous autumn seasons (i.e. for autumn 2019 and earlier).

Figure 2 Trends for autumn bird trapping activity with the use of mist nets in Cyprus, for all jurisdictions in the survey area



[12] Earlier BirdLife Cyprus trapping reports can be found here.

Table 1 Statistics for trend for autumn trapping levels based on Figure 2

	Multiplicative trend	Standard error	95% confidence interval	Trend direction
All squares	0.9362	0.0141	0.02763	Moderate Decline

Note 1: The multiplicative trend reflects the changes in terms of the average percentage change per year i.e. if the trend is equal to 1 then there is no change. Hence, value 0.9362 calculated above indicates an overall decrease in mist netting activity of around 6% per year.

Mist netting activity for autumn 2020 is **94% lower compared to the baseline year of 2002 (**index value is 6 for autumn 2020). **This is the lowest ever recorded trapping level since the start of the surveillance programme, a very encouraging outcome**. Furthermore, the overall trend is a statistically significant 'moderate decline'.

Figure 3 summarises autumn mist netting activity in the Republic of Cyprus (RoC) applying the same 'Linear trend model using the stepwise approach' in the TRIM program – with all years initially selected as changepoints in the TRIM analysis. Figure 4 summarises autumn mist netting activity in the Sovereign Base Area (SBA) applying the same 'Linear trend model using the stepwise approach' in the TRIM program. Note, however, that for the SBA analysis, TRIM would not run with the year 2003 as a changepoint. The sample of 185 squares surveyed in various seasons during the surveillance programme includes 115 squares within the RoC, 57 within the SBA and 13 squares that cover areas in both jurisdictions (referred to as 'joint' squares, including also areas that cover the SBA and UN buffer). For autumn 2020, the breakdown of the squares randomly selected and surveyed at a jurisdiction level were as follows:

- 37 squares within the Republic of Cyprus,
- 20 squares within the Dhekelia SBA, and
- 3 'joint' squares.

Figure 3 Trends for trapping activity for autumn mist netting within the Republic of Cyprus

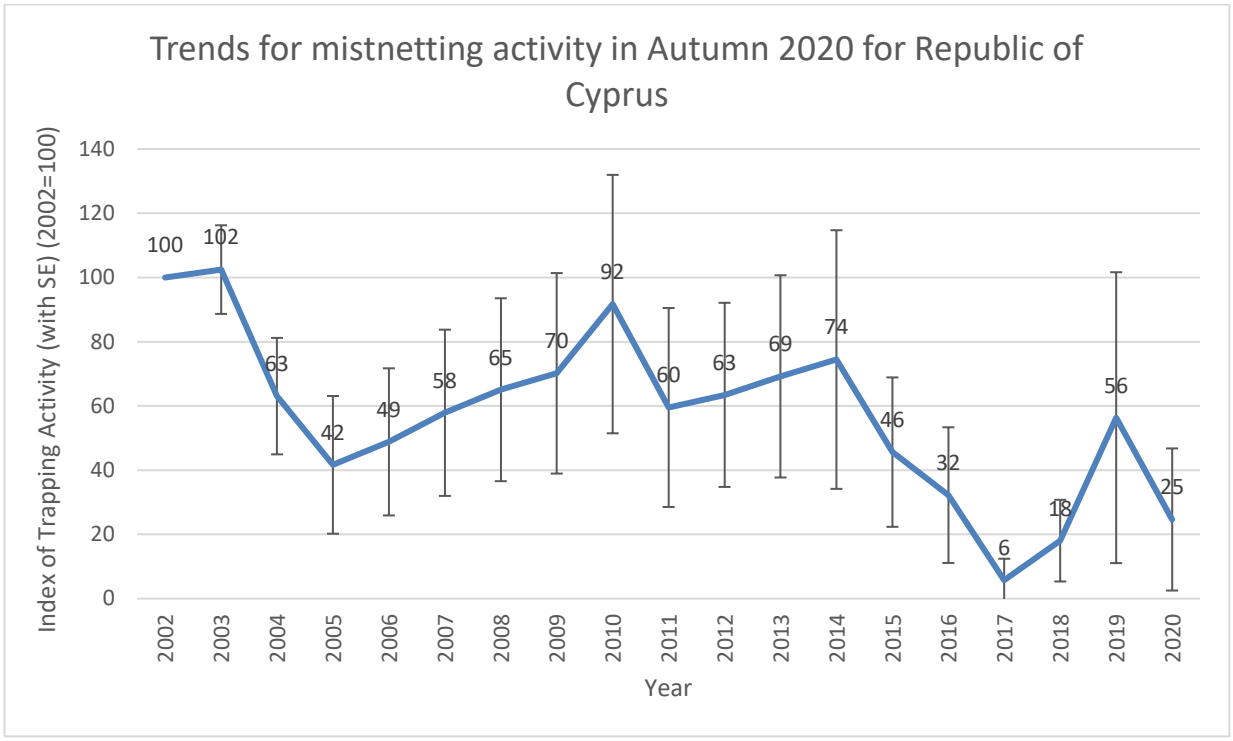


Figure 4 Trends for trapping activity for autumn mist netting within the SBA areas

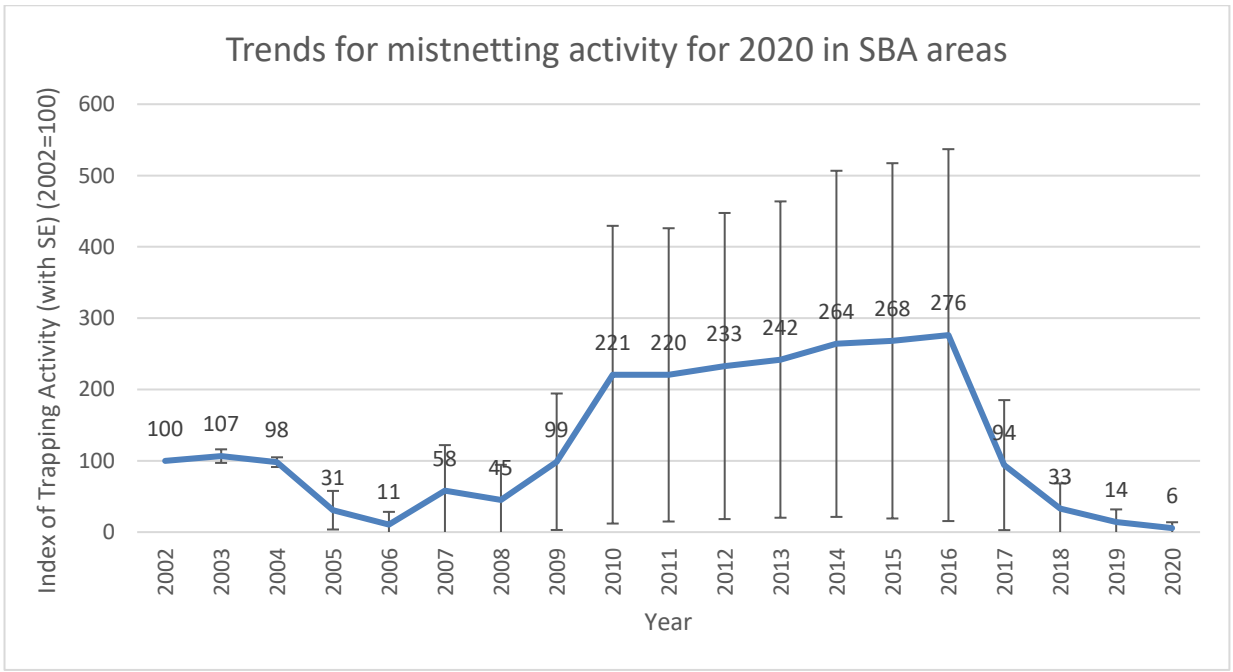


Table 2 Statistics for trends for autumn trapping activity levels based on Figure 3 and Figure 4

	Multiplicative trend	Standard error	95% confidence interval	Trend direction
RoC squares	0.9305	0.0154	0.030184	Moderate Decline
SBA squares	0.9769	0.0294	0.057624	Uncertain

At a jurisdiction level, the trapping activity trends indicate that:

- **For the Republic areas, autumn 2020 mist netting activity (index value 25) was 55% lower compared to autumn 2019 (index value 56). In comparison to 2002, the autumn 2020 levels were 75% lower. After registering an increase in mist net trapping for two years in a row, this year there was a decrease in mist net trapping in the Republic, a welcome result.**
    - For the 37 squares covered within the Republic, the range of counts was from 0 to 106 metres of active net rides, while no mist net trapping at all was recorded in 33 squares. The average within the Republic was six metres of active net rides per square surveyed (226/ 37 squares surveyed within the Republic = 6).
- **For the SBA areas, autumn 2020 mist netting activity (index value 6) showed a decrease of 57% compared to 2019 (index value of 14). In comparison to 2002, the autumn 2020 levels were 94% lower, continuing the positive downward trend for a fourth consecutive year.** This is the lowest ever mist netting activity recorded in the SBA areas since 2002.
    - As seen in Figure 4, the standard error bars for the SBA trend are noticeably wide. This is due to the following factors: the relatively small sample size (20 squares surveyed in autumn 2020), the large number of zero counts (16 out of the 20 squares surveyed recorded no trapping activity at all). It is anticipated that the new larger sample size in the SBA will only start to have an impact on the confidence limits in a few years' time.

For autumn 2020, the trend direction for the SBA areas is assessed as "uncertain" (see Table 2), similarly to autumn 2019

As for the Republic, the 'moderate decline' in trend direction noted last season, remains as a 'moderate decline' this season too. Despite the observed decrease compared to last year, Birdlife Cyprus highlights that there needs to be more effort placed on the prosecution of the big, organised trappers. Additionally, all the restaurants serving *ambelopoulia*, are found exclusively in the Republic, and still constitute the main economic incentive for organised trappers. Therefore, the Cyprus authorities have a major role to play in clamping down on the supply – demand business chain.

Illegal bird trapping with mist nets decreased overall during autumn 2020, based on the survey data from BirdLife Cyprus. This is a very positive outcome, which we hope will continue. Another positive outcome is the reduction of trapping with mist nets in the Cyprus Republic, compared to last year when an increase was observed. It should be noted here that many of the sites found active by our field team this season were in areas known to be operated by organized trappers. This emphasizes

the need for more enforcement against these big trappers by the Game and Fauna Service, as well as the need for more support in the enforcement effort from the Cyprus Police, who have a particular role to play when it comes to big, organised trappers. Despite the positive decrease in trapping with mist nets, the Birdlife Cyprus field team has noted an increase in trapping with limesticks, both in terms of the total number detected and the number of sites found active – something which is supported by CABS findings as well. This increase in limestick trapping seems to also be supported by the Game and Fauna service data, which show that two times as many limesticks were confiscated in autumn 2020 compared to autumn 2019.

The multi-pronged approach implemented by the SBA Administration and Police in the last few years, including close cooperation with NGOs such as Birdlife Cyprus, RSPB and CABS, has led to an even further reduction in trapping activity levels within the SBA areas. The trapping levels recorded in the SBA areas this season are the lowest ever recorded for that jurisdiction, making it a conservation success.

Enforcement

Overview of enforcement for autumn 2020

There are two competent authorities that are responsible for enforcement against illegal bird trapping in Cyprus: the Game & Fauna Service for areas controlled under the Republic of Cyprus, and the SBA Police Anti-Poaching Unit for areas within the UK Sovereign Base Areas. Prior to 2020, the Cyprus Police Anti-Poaching unit was also responsible for enforcement against illegal bird trapping in the Republic. However, in November 2019 the unit was dismantled13. Enforcement data from this competent authority can be found in Appendix 5. The resources of the above-mentioned enforcement bodies are as follows:

- Game & Fauna Service, the responsible body for the implementation of the Birds Directive, has around 210 game wardens in total across the whole of island. The Larnaca & Famagusta district, where most of the bird trapping takes place in Cyprus and where the survey area of BirdLife Cyprus is focused, has around 50 game wardens.

- SBA Police Anti-Poaching Unit was comprised of 10 officers at the Eastern Dhekelia Sovereign Base Area during the autumn trapping period (September to October). BirdLife Cyprus would like to thank the SBA Administration and SBA Police APU team for its willingness and support in undertaking joint field monitoring of illegal bird trapping with the BirdLife Cyprus team.

Table 3 summarizes the enforcement data of the two competent authorities regarding illegal bird trapping for the months of August, September and October, the main period for bird trapping in Cyprus, for years 2011 - 2020.

[13] See our report from Autumn 2019 for more details

Table 3 Summary of illegal bird trapping statistics of the competent authorities for the months of August, September and October for years 2011 - 2020

	Game & Fauna Service – Larnaca & Famagusta district[2]										**Dhekelia SBA Police Anti- Poaching Unit[3]**									
Years	***2011***	***2012***	***2013***	***2014***	***2015***	***2016***	***2017***	***2018***	***2019***	***2020***	***2011***	***2012***	***2013***	***2014***	***2015***	***2016***	***2017***	***2018***	***2019***	***2020***
No of trappers arrested / cases	57	70	78	64	54	35	19	21	25	26	23	22	22	30	17	29	6	12	8	4
No of mist nets[1]	204	311	287	235	230	195	39	34	21	34	361	275	227	184	181	496	154	51	20	13
No of limesticks[1]	2,550	5,372	3,830	1,577	1,740	1,291	521	1,186	903	1,876	290	314	516	256	234	295	259	116	97	29

N/A: Not available

Note 1: The total number includes both trapping paraphernalia (mist nets and limesticks) collected as court evidence when an arrest takes place and from confiscations.

Note 2: Data for 2020 provided from Game & Fauna Larnaca & Famagusta district officer via email (3rd February 2021).

Note 3: Data for 2020 provided from SBA police Anti-Poaching Unit sergeant after visit to SBA police station (21st January 2021).

- Game & Fauna Service – Larnaca & Famagusta district: The enforcement data for autumn 2020 show a similar number of prosecutions (26) compared to autumn 2019 (25), suggesting similar enforcement action by this agency across both years. As well as this, the data show a dramatic increase in limesticks confiscated compared to autumn 2019. This increase in limesticks is an indication that limestick trapping is increasing, something which is supported by Birdlife Cyprus' findings in the field and we believe it is attributed to the reduction of on-the-spot fines for limestick trapping.

- SBA Police Anti-Poaching Unit (APU) – Dhekelia Sovereign Base: The enforcement data for autumn 2020 show that four people were arrested for trapping, compared to eight during autumn 2019. The lower number of arrests could be attributed to the reduction in trapping activity within the SBAs, which is in turn supported by the lower number of mist nets and limesticks confiscated compared to 2019 (see Figure 4).

Illegal bird trapping has become a demand-driven wildlife crime, with the trading of trapped birds in lawbreaking restaurants being the key economic driver for organised trappers, who, as is generally acknowledged, make thousands of euros of illegal profit every year. These restaurants selling *ambelopoulia* are almost exclusively located within the Republic. Data provided from the Game and Fauna Service indicate that restaurant checks and prosecutions were more in 2020 compared to 2019 (see Table 4), and led to the prosecution of a restaurant owner who received a €12,000 fine[14]. BirdLife Cyprus believes that more enforcement is needed, particularly on the big, organised trappers and on restaurants, in order to stop this illegal demand-supply profitable business.

Table 4 Summary of restaurant checks and prosecutions in Cyprus

	2010[1]	**2011[1]**	**2012[1]**	**2013[1]**	**2014[2]**	**2015[3]**	**2016[3,4]**	**2017[4]**	**2018[5]**	**2019[6]**	**2020[7]**
Restaurant checks	20	31	18	7	14	8	12	21	20	7	10
Restaurant prosecutions	13	15	8	3	1	1	1	7	5	0	1

Note 1: Data source for years 2010-2013: Ombudswoman report dated 27/5/2014 (http://www.ombudsman.gov.cy/ombudsman/ombudsman.nsf/index_new/index_new?OpenForm).
Note 2: Data source: Reply from Ministry of Interior to question of Member of the Parliament Mr Perdikes (question dated 15/6/2015, ref no 23.06.010.04.629) regarding restaurant prosecutions by the Game and Fauna Service for year 2014 available here.
Note 3: Data source: Reply letter from Game Service dated 11/8/2017.
Note 4: Data source: Letter from Cyprus Police headquarters dated 25th January 2018.
Restaurant check breakdown: Nicosia – 10, Limassol – 3, Larnaca – 8, Famagusta – none, Paphos – none
Restaurant prosecution breakdown: Nicosia – 5, Limassol – 1, Larnaca – 1, Famagusta – none, Paphos – none
Note 5: Data source: Letters from both GFS headquarters and Cyprus police Headquarters (Information received on 11/1/19 and 11/2/19 respectively)
Restaurant check breakdown from Cyprus police for 2018: Nicosia -3, Limassol-none, Larnaca – 6, Famagusta – none, Paphos – none.
Restaurant checks from GFS for 2018: 11 checks in total
Restaurant prosecution breakdown from both agencies: Nicosia - 4, Limassol – none, Larnaca – 1, Famagusta – none, Paphos – none.
Note 6: Data source: Email sent to Birdlife Cyprus by Game and Fauna Service official (13/1/20).
Note 7: Data source: Email sent to Birdlife Cyprus by Game and Fauna Service official (12/1/21).

[14] Information provided from Game and Fauna official in November 2020

Feedback from competent authorities to BirdLife Cyprus reports

Table 5 summarises the number of reports that BirdLife Cyprus provided to the competent authorities regarding active trapping sites and the overall feedback given by the competent authorities. The information presented in the table below refers to active trapping sites as recorded by the survey team (this includes all net codes, P, ANN, AUN and ASN – see Appendix 1 for net ride classification - and sites where limesticks were found) and were reported to the competent authorities for further action.

With regards to the Game and Fauna Service, 17 locations were reported to this agency. At two sites confiscation of limesticks occurred, while there was no feedback about the other 15 sites reported by Birdlife Cyprus. For the two sites, Game and Fauna service wardens responded the same day or at most the next day and provided feedback within the same day of visiting the locations reported to them.

With regards to the Dhekelia SBA Police Anti-Poaching Unit, nine locations were reported to this agency. Based on the feedback provided from the SBA Police, mist nets and limesticks were confiscated at four locations. The remaining five locations were placed under observation, however no arrests or confiscations took place. Feedback and response time from SBA Police about locations visited and found active was given on the same day, or next day at most.

Table 5 Summary of trapping reports provided to competent authorities from Birdlife Cyprus during autumns 2012-2020

	Game and Fauna Service – Larnaca & Famagusta									SBA Anti-Poaching Police Unit								
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2012	2013	2014	2015	2016	2017	2018	2019	2020
Number of reports[1]	50	43	33[6]	23	21	8	17[8]	11	17[11]	52	38	40	51	34	26	12	14	9
Arrests[2]	17 (34%)	19 (44%)	8[6] (24%)	11 (48%) [7]	10 (48%)	N/F[5]	N/F	N/F	N/F	9 (17%)	8 (21%)	6 (15%)	4 (8%)	5 (15%)	0 (0%)	7[9]	0	2[10]
Confiscations[3]	10 (20%)	8 (19%)	11 (33%)	None	1 (5%)	N/F	N/F	2	2	22 (42%)	18 (47%)	5 (15%)	10 (20%)	14 (41%)	3 (12%)	2	6	4
Clearance[4] / Nothing Found[5]	23 (46%)	16 (37%)	14 (42%)	12 (52%)	10 (48%)	N/F	N/F	N/F	N/F	21 (40%)	12 (32%)	29 (70%)	37 (72%)	15 (44%)	23 (88%)	8	8	6

N/R – Not relevant; N/A – Not available; N/F – No feedback provided

Note 1: Reports may also include reports from members of the public that were sent to the competent authority via BLCY.

Note 2: Arrests represent individual people and not specific sites. E.g. If 4 people are arrested at one trapping site that will count as 4 arrests.

Note 3: Confiscations of mist nets, limesticks and/or calling devices

Note 4: Clearance refers to collection of trapping paraphernalia such as pole bases, poles, loudspeakers, wires etc.

Note 5: 'Nothing found' refers to reports where the competent authority checked the trapping location but reported it inactive (no nets or limesticks were found) upon its visit, hence no prosecution or confiscation took place, or no feedback was provided.

Note 6: Two sites were reported to both the Game Service and the Cyprus Police (autumn 2014) – both reports resulted in prosecutions and they are accounted for in the statistics of both enforcement agencies shown above. The feedback for these two sites was provided from the Game & Fauna Service and is used to calculate the % value for the Cyprus Police.

Note 7: Two of the BirdLife Cyprus' reports that resulted in prosecutions were for illegal shooting of bee-eaters.

Note 8: Three reports are for illegal hunting of bee-eaters and one is for illegal feeding of birds for hunting purposes.

Note 9: 7 people were arrested due to video evidence collected at 2 different trapping locations.

Note 10: 2 people were prosecuted for trapping at the same location

Note 11: No official feedback was provided. However, 2 locations were reported on the spot to Game wardens who responded to the reports and provided feedback to Birdlife Cyprus directly.

Enforcement on the ground – on-the-spot fines in the Republic, three years later

In July 2017, an amendment to the 'Protection and Management of Wild birds and Game species' Law of 152/2003' would regulate all bird trapping and poaching offences as on-the-spot fines (as opposed to court prosecution). At the time, BirdLife Cyprus expressed its opposition to this amendment, having serious reservations over how game wardens and police officers would be able to impose on-the-spot fines without risking their personal safety – read relevant article published early July 2017.

Despite our concerns, over the past three years, the Cyprus enforcement agencies, and particularly the Game and Fauna Service, have been implementing the on-the-spot fine provisions adopted in July 2017, issuing high fines. This has acted as a significant deterrent for trappers, especially for trapping with mist nets.

That said, from the on-the-spot fine data provided to Birdlife Cyprus for the period of July 2017 to December 2020 by the Game and Fauna Service, it seems that the higher the fine, the less chance there is of it being paid by the offender. Table 6 below shows that even though more than half the fines handed out so far have been paid (320 from 545), the money these fines equate to (€660,000) only add up to around one third of the total money from all the fines (€1,736,000). It appears that fines of €4,000-5,000 and higher are not paid (based on averages), with offenders being led to the courts for prosecution. It is important to highlight that unpaid fines led to court (205 in number) equate to 38% of all fines issued.

Table 6 Breakdown of on the spot fines handed out from July 2017 until the end of December 2020

	No. of Fines	**Amount in Euro**
Fines that have been paid	320	661,827
Fines still pending payment	20	79,953
Fines that haven't been paid and will/have gone to court	205	994,352
Total	545	1,736,132

Table 7. Average fines under different circumstances

Average fine given by courts prior to 2017 law amendment (€)	Average size of on-the-spot fine which is not paid and thus taken to court (€)	Average fine issued by courts to people who did not pay their on-the-spot fine (€)[15]
780	4,850	1,900

Birdlife Cyprus has expressed concerns about the lack of information regarding the court sentencing and specifically the rulings made by judges regarding unpaid fines. The data in **Error! Reference source n ot found.** shows some indicative values of fines under different circumstances, provided by the Game and Fauna Service, and confirms Birdlife Cyprus' fears that once a fine is not paid and goes to court, the offenders are handed out lower fines. Although there is still an improvement in comparison to the much lower fines given out by courts prior to 2017, this significant difference between the unpaid on-the-spot fines and the court sentences is very worrisome and could compromise the entire on-the-spot fine system, making it ineffective.

Furthermore, our field team this season noted an increase in limestick trapping, something which is also indicative from the enforcement data provided by the Game and Fauna service (see Table 3). BirdLife believes that this increase in the use of limesticks for bird trapping can be attributed to the much lower fines for this offence of 200 euros compared to other similar offences (which are 2000 euro fines). See under following sections for more on this.

[15] Up to date Information provided from GFS official during telephone conversation on 8/2/2021

Social and political attitudes

Developments in the Republic of Cyprus

Organised trapping with mist nets remains one of the biggest issues as far as illegal trapping in Cyprus is concerned. Several large trapping sites, controlled by organised criminals, operate without fail in the Republic of Cyprus. In 2019, after multiple failed attempts by Game and Fauna Service and the Cyprus Police Anti-poaching unit, to shut down one such large trapping site, Birdlife Cyprus published a press release calling on the authorities to take serious action against large and organised trapping sites. Unfortunately, no further action was taken by the competent authorities in 2019. In autumn of 2020, and without the Cyprus Police Anti-poaching unit in existence anymore, Birdlife Cyprus feared that there would be absolutely no action taken against this specific large-scale trapping site. Both BirdLife Cyprus and CABS reported this site to the Game and Fauna Service and Cyprus Police on several occasions during the autumn trapping period. Despite delay in taking action, in November 2020, an operation was carried out on the trapping site as well as searches at several houses associated with illegal bird trapping activity. In total, five mist nets, five calling devices and 366 dead birds were found at three different locations, including the trapping site. Three persons were issued with fines totalling €11,600. This is a very welcome result, and we hope will be continued in autumn of 2021. See here for more details.

Key changes to the "Protection and Management of Wild Birds and Game Species" Law 152/2003

Various amendment laws in relation to the 'Protection and Management of Wild Birds and Game Species Law' have been by the Cyprus Parliament in recent years. Although some changes have been positive, BirdLife Cyprus considers the following changes as relaxations and dangerous loopholes:

1. The consumption of legally killed game in restaurants, as long as they are cooked prior to being brought to the restaurant,
2. The on-the-spot fine for the illegal use of up to 72 limesticks has been set at 200 euros (compared to other similar offences that fines start from 2000 euros onwards), and.
3. The killing of upto 50 birds from a list of 14 protected, non-game species, either with the use of limesticks or with shooting, has been set at 200 euros (compared to other similar offences for game species that fines start from 2000 euros).

Regarding the first negative change, it is now legal for hunters to take their legally shot game to restaurants to eat, provided it has been already cooked prior to arriving at the restaurant. BirdLife Cyprus expressed its objection to this change as we consider it a dangerous loophole that allows the introduction of illegally caught wild birds into restaurant premises, making enforcement ineffective as it is almost impossible to distinguish between cooked legally shot game and cooked illegally trapped birds.

A major issue has been the much lower fine related to the offence of trapping with limesticks, set at 200 euros under the relevant amendment, passed by Cyprus Parliament in 2017. BirdLife Cyprus expressed its objection to this change as it essentially decriminalized limestick trapping. In comparison, for the use of other non-selective methods such as mist nets, the on-the-spot fine has been set at 2000 euros. Enforcement data provided by the Game and Fauna Service, as well as field data gathered by the BirdLife

Cyprus field team, indicate an increase in limestick trapping compared to autumn 2019. We believe this indicative increase can be attributed to the much lower fines for limestick trapping, which in the eyes of the trappers has made the use of limesticks as a 'less serious' offence.

The latest change that BirdLife considers a serious relaxation is the 200 euro fine related to killing of up to 50 birds from a list of 14 protected, non-game species, either with the use of limesticks or with a shotgun. This is the most recent change, passed last December 2020 by the Cyprus Parliament, after an amendment law was submitted by the Game and Fauna Service to the Parliament for discussion and voting. It is highlighted that prior to this change, the killing of any of the 14 protected species[16] was punishable by a 2000 euro on-the-spot fine. Moreover, these specific species are the target species for trappers and poachers for the 'ambelopoulia' dish. **We believe this is a major step backwards regarding bird conservation in Cyprus, as it has created a subcategory of 'less protected' birds species, and we believe it will increase the illegal hunting of these species.**

The illegal shooting of protected species is already a problem in Cyprus, as reported by BirdLife Cyprus field team when in September 2020 widespread illegal killing of migratory species was detected in Larnaca district. This concerns a well-known illegal hunting blackspot which has been reported to Birdlife Cyprus for many years now however, not a single hunter has been prosecuted for illegal hunting at this site. The incident was covered by media extensively after Birdlife Cyprus sent out a press release. For more details please see here and here. We fear that illegal shooting of protected species will worsen and will become commonplace in Cyprus now, as fines of 200 euros cannot be considered deterrent, similarly to the fines for trapping with limesticks.

Developments in the Eastern (Dhekelia) Sovereign Base Area

For yet another year, SBA Police and Administration have continued to apply the partnership approach adopted in 2017, strengthening their collaboration with NGOs. The joint-monitoring survey with Birdlife Cyprus continued, as did the collaboration with CABS. Several times during the year environmental NGOs with whom the SBA police and Administration collaborate were invited to stakeholder meetings where bird trapping developments were discussed, and each organisation provides feedback regarding the trapping situation in the SBA areas. The development and implementation of an action plan to tackle illegal trapping issues within the SBAs is a major step in the right direction, setting a framework of actions for each trapping season that are reviewed every trapping season. Stricter measures such as the confiscation of trappers' vehicles, the revoking of their land lease agreements, as well as the use of new technology such as drones were maintained as actions and measures within the action plan.

[16] The species in question are: Blackcap (Sylvia atricapilla), European Bee-eater (Merops apiaster), Common Chaffinch (Fringilla coelebs), Spanish Sparrow (Passer hispaniolensis), House Sparrow (Passer domesticus), European Robin (Erithacus rubecula), Common Whitethroat (Sylvia communis), Spotted Flycatcher (Muscicapa striata), Common Chiffchaff (Phylloscopus collybita), Willow Warbler (Phylloscopus trochilus), Eurasian Reed Warbler (Acrocephalus scirpaceus), Sedge Warbler (Acrocephalus schoenobaenus), Cetti's Warbler (Cettia cetti), Golden Oriole (Oriolus oriolus).

4. Discussion & Recommendations

2020 saw a decrease in trapping with mist nets for a fourth consecutive autumn season. Overall, there has been a 94% reduction in mist netting activity between the baseline year of 2002 and 2020, within the survey area, which covers the worst trapping areas of Cyprus (see Figure 2).

With regards to the SBAs, trapping levels have continued to decrease during this autumn, continuing and building on the significant progress that has been achieved since 2016 (see Figure 4). During this autumn, our team recorded the lowest levels of trapping in the SBA areas, since the start of the monitoring survey in 2002. As in recent years, once again, no trapping activity was recorded on what used to be the trapping hotspot of Cape Pyla, a very welcome development. Birdlife Cyprus acknowledges in full the success of the SBA Police and Administration in tackling the illegal trapping issue within their jurisdiction. It is evident that the new partnership approach and the internal anti-trapping action plan that the SBAs have put in place in the last few years, in conjunction with the close collaboration with NGOs, are having tangible results on the ground. This approach and associated measures must be continued into 2021 and beyond, to ensure this success is maintained.

Improvement was also recorded in the Republic of Cyprus where a reduction of 55% was recorded, compared to the trapping levels of 2019, with regards to mist netting (See Figure 3). Moreover, BirdLife Cyprus acknowledges the enforcement action taken by the Game and Fauna Service. On the other hand, it appears that there is an increase in the use of limesticks, based on the field data gathered from BirdLife Cyprus. (See Table 3). Although Birdlife Cyprus's survey does not focus on trapping with limesticks, the field team located ten sites at which limestick trapping was taking place, and in total located 213 limesticks set out. This pattern is also seen in the enforcement data provided by the Game and Fauna Service, with more limesticks confiscated during autumn 2020 compared to previous years.

In November 2020, a successful operation was undertaken by Cyprus Police against a well-known trapping site in the Larnaca District, including searches at houses linked with this illegal activity. Five mist nets, five calling devices, and 366 birds were found at three different locations, resulting in total fines of €11,600 for three trappers. However, this operation occurred at the end of the trapping season, and only after Birdlife Cyprus and CABS reported the illegal activity on numerous occasions to the competent authorities. It has become clear that the dismantlement of the Cyprus Police Anti-poaching unit in November 2019 has created a major gap on enforcement against the big, organized trappers. We believe that the Game and Fauna Service, with support from the Cyprus police, need to place more emphasis on tackling the big, organized trappers.

Last December 2020 the Cyprus Parliament voted for various amendments to the "Protection and Management of Wild Birds and Game Species law". One of these amendments was to reduce the on-the-spot fine for the illegal shooting and trapping with limesticks for up to 50 birds from a list of 14 species from €2000 to €200. We strongly believe that this is a dangerous relaxation of the law, and it essentially decriminalizes the shooting and trapping of these 14 species, since it has created a separate, 'less protected', much lower fine category for these target species. We believe that fines or any criminal sanctions in general need to demonstrate and ensure that they are effective, proportionate and dissuasive, as stated also in the Environmental Crime Directive (2008/99/EC).

We fail to understand how these new, significantly lower fines for songbird trapping and shooting will be deterrent towards the lawbreakers.

The absurdity of this law change is even more evident when one realizes that the fines for offences in relation to game species have been kept high and deterrent, at €2000. We consider that the creation of this 'less protected' category is a major setback for bird protection in Cyprus and it is not enforceable in practice as species on this list are very similar to species which are not on the list (e.g. other warbler species). In practice it indirectly encourages the illegal killing of songbirds and Birdlife Cyprus believes will increase this phenomenon on the island over the coming years. In the past few months, BirdLife Cyprus has witnessed and reported to the authorities a numbers of incidents relating to the illegal killing of migratory birds, including the extensive illegal shooting of tens of bee-eaters last October 2020 at a hunting area in Larnaca district

Recommendations

In conclusion, BirdLife Cyprus stresses the following actions and measures as areas for action in 2021:

1) The Cyprus Parliament to revisit the amendments to the "Protection and Management of Wild Birds and Game Species law" and to restore the fines for limestick possession and use, as well as killing of 14 specific protected species, from 200 to 2000 euro.
2) The Cyprus competent authorities to strengthen the collaboration with environmental NGOs on the ground, adopting a similar approach to that taken by the SBA Police, in order to make enforcement action more effective.
3) The Game and Fauna Service needs to draw up an action plan with a focus on the big, organized trappers with the support of the Cyprus police, for its implementation. Furthermore, the Cyprus authorities need to undertake increased and consistent enforcement action against law-breaking restaurants serving illegal ampelopoulia "delicacies" (to address demand).
4) Training to be provided to the Judiciary and Prosecutors regarding the on-the-spot fine system and the seriousness of trapping as a wildlife crime, in order to address the large discrepancy observed between on-the-spot fines issued and court sentences handed out. We consider that the Game and Fauna Service, as the responsible authority for the implementation of the Birds legislation, is best placed to do this.
5) The SBA Administration to continue with the collaborative partnership approach adopted with environmental NGOs and the implementation and review of its action plan.
6) The SBA Administration to move to draw up a habitat management plan for the long-term eradication of invasive acacia on Cape Pyla, in line with the responsibilities to manage the SAC (Special Area of Conservation), and to restart the acacia removal programme.

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Appendix 1

Methodology of the trapping surveillance programme

Survey area and sampling strategy

The surveillance project began in 2002 with the coverage of 60 sample squares (each 1x1 km) chosen at random from within a 261 km2 study area, which covered most of the Famagusta/Eastern Larnaca area and the Ayios Theodoros – Maroni area.

In 2005, the monitoring became more targeted, focusing on habitat suitable for trapping. Each 1 km square within the study area was classified as either a 'possible bird trapping area' or 'unlikely bird trapping area' based solely on the presence or absence of vegetation suitable for setting limesticks or nets. Surveillance subsequently took place in 'possible' squares only. Some 44 of the original 60 sample squares were 'possible bird trapping area' squares under the new classification. These 44 squares were kept, with another 16 new squares chosen randomly to bring the total sample to 60 again.

Then, in 2007, the survey area was expanded to cover 295 km2 for Famagusta/Eastern Larnaca area and 111 km2 for Ayios Theodoros – Maroni area, bringing the total survey area to 406 km2. This was done after preliminary surveys in autumn 2006 found evidence of extensive trapping on the margins of the original (261 km2) survey area. The sample size was expanded to 100 squares (40 new squares were randomly chosen) to allow for this extension of the survey area. Out of the 406 1 km2 squares of the expanded survey area, 301 have been classified as 'possible bird trapping area' squares.

In 2017, the Ayios Nikolaos Area of the ESBA was added into the survey after reports from CABS of extensive trapping taking place in this area. An additional 18 squares were added to the survey area bringing the new total to 405 squares adding up to 310 square kilometres.

The random selection of sample squares is stratified to ensure representative coverage of areas under SBA, Republic of Cyprus and "joint" jurisdiction (squares where the two jurisdictions meet). In terms of the analysis of the survey data BirdLife Cyprus is using the TRIM (TRends & Indices for Monitoring data) programme, which enables the analysis of time series of counts with missing observations (read more about TRIM in Appendix 4.

Surveying for trapping activity

Surveying consists of a two-man team systematically searching for evidence of illegal trapping activity in the randomly selected one by one kilometre squares. The time taken to survey each square is recorded, as are weather patterns and the presence or absence of large numbers of migrant birds.

For safety reasons (avoidance of possible confrontation with trappers) the BC observers do not go out in the field at dawn, which is the main period of trapping activity, but carry out surveys between 09:00 and 17:00. Each sample square is surveyed only once each season, partly for safety reasons (minimising the risk of the observers becoming known to trappers) and partly because repeat sampling of each square has no particular value when it comes to analysis of the collected data. Opportunistic observations are also made in the surroundings of squares where mist netting is suspected. Trapping activity includes:

- mistnetting activity, which is the main focus of the surveillance programme of BirdLife Cyprus. This is calculated using the total length of active net rides recorded within the survey area; and
- limesticks, using the total number of active limesticks found within the survey area.

Mist nets

The two observers carry out a thorough search of all habitat patches suitable for the setting of mist nets (i.e. all areas with bushes and/or trees) within each sample square. The observers record all direct and indirect evidence of mist net and tape lure use and of net ride preparation and use (e.g. cleared corridors within vegetation for putting up nets, presence of pole bases). The codes used for the various categories of mist netting activity and tape lure use are given below, as are the codes used for recording the type of habitat where trapping activity is detected. The surveyors note cases where they come across enclosed (fenced) areas that they cannot see into at all, or cannot see into well enough to survey fully.

Box 1 Key to survey codes used for the field

Net code	Habitat code	Tape lure code
O – old ride	A – acacia	P – tale lure present, playing
P – ride recently prepared	C – citrus	L – loudspeakers present
ANN – active no nets present	E – eucalyptus	Y – tape lure present, not playing
AUN – active unset net present	F – fig	U – unknown
ASN – active set net present	J – mulberry	W – electrical wires associated
IUN – inactive unset net present	O – olive	with tape lures
	M – maquis	B – car battery present
	P – pomegranate	
	K – carob	
	Cy – cypress	
	L – lentisk	
	S – syrian plum	

The main net ride classifications are described below:

- Prepared (P): A net ride that is clearly ready to be used but there is no evidence e.g. bird feathers, blood stains, thrown pebbles, to suggest illegal activity was taking place the previous night / morning (see Figure 4),
- Active No Net (ANN): A net ride that from the evidence found e.g. bird feathers, blood stains, thrown pebbles, indicates that illegal activity was taking place the previous night / morning but no net is present (see Figure 5),
- Active Unset Net present (AUN): A net ride where the trapper has left the mist net on the poles but it is furled i.e. the mist net is not stretched up for catching birds but lowered down (or the net is placed e.g. under a tree) (see Figure 6), and
- Active Set Net present (ASN): A net ride where the trapper has left the mist net set on the poles and it is ready for catching birds (see Figure 7).

Figure 5: Prepared (P) net ride

Figure 6: Active No Net ride (ANN) with poles, bases, feathers & signs of trampling in an olive grove

Figure 7: Active Unset Net present (AUN) in an olive grove

Figure 8: Active Set Net present (ASN) –corridors in orchards are often used for mist netting

Limesticks

While the main effort of the observers is to locate evidence of mist netting, all evidence of limestick activity is also recorded. Limesticks are much harder to locate in the field than mist nets and are often set in a different habitat to mist nets. In addition, incidental evidence for limestick use is hard to detect (though trees pruned to hold limesticks are readily identifiable). It is impractical to search entire 1 km2 sample squares for limesticks due to the time consuming nature of the task. The protocol is therefore for the observers to look out for limesticks while concentrating on surveying for mist netting activity.

Appendix 2

Survey data for autumn 2020

Confidential Information. Only provided upon approval of request.

Appendix 3

Estimation of numbers of birds caught during autumn 2020

It is important to note that the estimated death toll does not take into consideration any net rides that have been classified as 'Prepared' (previously this net ride classification was also considered for the death toll estimation), following the recommendation included in the BTO assessment report (July 2015) to revise slightly the calculation.

The following key assumptions are applied for the estimation of the birds killed:

- 12 metres is the assumed average length for a mist net
- 20 birds are caught per 12-m net per day (Magnin, 1986)
- 0.5 birds are caught per limestick per day
- 60 days is the duration of the trapping period for spring and autumn seasons
- 50% scaling factor – applied for spring estimates to account for a lower number of migrating birds passing via Cyprus compared to the autumn
- 405 are the possible bird trapping squares within the survey area as identified from the surveillance programme in 2007 (the random sample of squares surveyed by BirdLife Cyprus is taken from these 301 squares)
- 75% of illegal trapping activity for all of Cyprus takes place within the survey area (based on input from enforcement authorities and other experts)
- Net ride categories 'ANN' (Active No Nets), 'ASN' (Active Set Nets) and 'AUN' (Active Unset Nets) nets are assumed that they are active every day during the trapping season (read Appendix 1 for details on net ride classification).
    - Note: Net ride category 'P' (Prepared) is not taken into account for the estimation of numbers of birds killed anymore, following the recommendation of BTO science experts (BTO report, July 2015) to revise slightly the equation.

Using the above assumptions the bird death toll is estimated as follows for autumn:
For nets = [(Total length of ANN+AUN+ASN rides)] / (average length of a net) x (20 birds per net per day) x (total number of 'possible bird trapping area' squares / number of squares surveyed) x (length of trapping season in days)

= [(300+0+110] / (12) x (20) x (405/60) x (60)

= 276,750 birds could have been caught within the survey area in **mist nets**.

For limesticks = (Total number of limesticks found) x (0.5 birds per limestick per day) x (total number of 'possible bird trapping area' squares / number of squares surveyed) x (length of trapping season in days)

= 86 x 0.5 x (405/60) x 60

= **17,415** birds caught within the survey area on **limesticks**

In total 294,165 birds could have been killed in mist nets and on limesticks within the survey area during autumn 2020. Assuming that the survey area accounts for 75% of the trapping activity in Cyprus, the bird death toll in Cyprus is:
= 294,165/ 75%
= 392,220 birds could have been killed in nets and on limesticks across all Cyprus during autumn 2020.

Note: these death toll estimates do not take into consideration any illegal bird trapping taking place into the Turkish occupied part of Cyprus.

Appendix 4

TRIM model description

TRIM (TRends & Indices for Monitoring data) is a program for the analysis of time series of counts with missing observations. The program can be used to estimate indices and trends and to assess the effects of covariates on these indices and trends. TRIM analyses time series of counts, using Poisson regression and produces estimates of yearly indices and trends (Panneloek & van Strien 2005). If observations are missing, TRIM estimates the missing values on the basis of changes observed on plots that were monitored.

In other words, TRIM enables us to use the data from all the trapping survey squares ever surveyed under the BirdLife Cyprus surveillance programme during the autumn period, in total 104 squares, even though these squares were not all covered each autumn season. The programme 'fills in' missing values for squares that were not covered in a particular year on the basis of the general trend derived from the data as a whole. The TRIM software (freely available from here) is very widely used for analysis of field data from ecological or biological studies. It works as an index, setting the first year of a time series of data the value of 100 (in this case year 2002) and showing up or down changes in subsequent years relative to this value of 100. TRIM program allows the user to select various models to undertake the analysis: a) Model 1: No time-effects, b) Model 2: Linear (switching) trend, and c) Model 3: Effects for each time-point. **For the analysis presented in this report BirdLife Cyprus has selected Model 2, following the advice of RSPB senior conservation scientist Mr Simon Wotton**. Below is an explanation of why.

Which model should one use: the time-effects model or the linear trend model? (Panneloek & van Strien 2005)

The time effects model (= year effects model in case the time points are years) estimates parameters for each separate year and should be chosen if one wants to assess indices for each year. The linear trend model should be chosen if one is interested in testing whether a trend has happened across a number of years, by selecting one or more years as changepoints. The linear trend model should also be chosen when the data are too sparse to run the time effects model. Using the linear trend model also allows testing trends before and after particular changepoints. Options are (1) to test trends before and after a priori selected changepoints or **(2) to let TRIM search for the substantial changepoints by using the stepwise procedure.** If all years are selected as changepoints, the linear trend model is equivalent to the time effects model (although it results in a description in terms of trend slope parameters rather than time point parameters). Note that the linear trend model also produces indices for each year, but not necessarily based on yearly parameters as in the time effects model. Instead of yearly parameters, the linear trend uses the trend across a number of years to approximate the indices.

BirdLife Cyprus has used the 'Linear trend model by using the stepwise procedure and with all years selected as changepoints' for the trend analysis presented in this report, following the recommendation of RSPB senior conservation scientist Mr Simon Wotton. The linear trend model can be run without any changepoints selected. Thereby it imputes missing counts based on the trend over the whole period studied. Be careful in using the model without any changepoints; the resulting indices might be unrealistic (this is the key point why this approach was not recommended and all years were selected as changepoints).

Appendix 5

Statistics of the Cyprus Police Anti-poaching unit.

Summary of illegal bird trapping statistics of the Cyprus Police APU for the months of August, September and October for years 2011 - 2019

Cyprus Police Anti- Poaching Unit[4]									
Years	***2011***	***2012***	***2013***	***2014***	***2015***	***2016***	***2017***	***2018***	***2019***
No of trappers arrested / cases	N/A	N/A	N/A	27	28	36	13	4	N/A
No of mist nets[1]	N/A	116	N/A	116	121	164	37	5	N/A
No of limesticks[1]	N/A	4,799	N/A	3,950	3,359	1,915	811	213	N/A