

In Cyprus, as in many countries in the Mediterranean where birds pass through in great numbers, they have long been persecuted in many ways and by many people. The most commonly used methods are shooting, liming and recently, the use of mistnets. Liming and netting have now become unacceptable to many people because they are indiscriminate and cruel.

Both national and international conservation organisations have expressed their grave concern about the continuing mass destruction of birds on Cyprus. On several occasions, the International Council for Bird Preservation and its European Continental Section have unanimously adopted a resolution calling upon the Cyprus Government to take serious note of the prevailing situation. Local conservationists strongly protested for years through a 'Save the Migrants' campaign. Eventually in December 1984, the Council of Ministers decided to approve enforcement of the provisions of Law no. 39 of 1974 concerning the protection and development of Game and Wild Birds. This law explicitly prohibits the use of nets and limesticks for the capture of game and wild birds.

According to various national conservation organisations (Cyprus Ornithological Society (1957), Cyprus Ornithological Society (1970), Friends of the Earth (Cyprus)), in spring and autumn 1985 poachers were indeed prosecuted for the illegal use of mistnets, though the situation in respect of limesticks remained obscure. It was felt important to produce an authoritative dossier of evidence of illegal shooting and catching activities during the spring and autumn migration season of 1986.

ICBP therefore commissioned Gernant Magnin to investigate the situation in the Republic of Cyprus during spring and autumn 1986. This study was made possible by grants from the World Wide Fund for Nature, Friends of the Earth (Cyprus) and Cyprus Ornithological Society (1957). Fieldwork was carried out from 3-24 April and from 31 August-14 December 1986, with co-operation from the Cyprus Ornithological Society (1957), Cyprus Ornithological Society (1970), Friends of the Earth (Cyprus) and Cyprus Wildlife Society.

SUMMARY

Cyprus has long had the unenviable reputation of killing more migratory birds per capita than any other country in the Mediterranean. According to the Cyprus Ornithological Society (1970) (ICBP Section for Cyprus), some 25 million birds are killed annually (COS 1970, 1980); some of these are shot but most are caught with the use of limesticks and mistnets. Both catching methods are illegal under present Cyprus law. After years of protest, the Government of the Republic of Cyprus decided in December 1984 to improve the situation for migratory birds in Cyprus.

Due to the conflicting information received in 1985 regarding the magnitude of catching after the government's decision, ICBP assigned Gernant Magnin to undertake a survey of the situation in the Republic of Cyprus during spring and autumn 1986. Investigations in the main catching areas were carried out from 3-24 April and from 31 August-14 December. In addition, ornithologists and government employees were questioned. This report presents the results of the surveys and discusses their implications.

From the investigations it appeared that the use of mistnets had indeed greatly declined after the government action in 1985. Although in the spring of 1986 hardly any liming took place limesticks were used blatantly and on a large scale in the autumn of 1986, especially in the south-east of Cyprus, where the authorities proved to be completely complacent about applying the law concerning limesticks. The total number of birds caught during 1986 on limesticks and by mistnets approaches 2.2 million, of which up to 1 million are caught on limesticks in the Paralimni region in the south-east of Cyprus alone. The drastic decline in the number of mistnets in use was very encouraging, but much has still to be done before mistnets are completely abolished.

General information about Cyprus is given in the introduction. Methods of liming and netting, catching areas and periods are discussed, followed by the results of the investigations carried out in 1986. Shooting, and the Wildlife Law and regulations are discussed in separate chapters. Recommendations are presented in the final chapter. In appendices, the complete Wildlife Law 39/74, weather reports in the relevant period, and a summary of bird sightings are presented.

The catching and eating of birds is very traditional in Cyprus. Small birds, like *Sylvia*-warblers, are considered a particular delicacy. Cypriots call these small birds 'ambelopoulia', which means 'birds of the vineyards'. Since the Blackcap is the most eaten and thus best-known bird in Cyprus, the name ambelopoulia in fact refers to the Blackcap only. Every other small bird is called 'sikallidi' regardless of whether it is of a *Sylvia* or *Hippolais* species. Once the birds have been plucked, however, every corpse is named ambelopoulia.

The practice of eating small migratory birds goes back at least as far as 1553, when John Locke describes how Venetians shipped large quantities of ambelopoulia to Italy (Locke in Sitas 1974). And in 1974, the year in which Law 39 was enacted which prohibits the catching of small birds, Sitas (1974) describes ambelopoulia thus: 'Nowadays, during September and October, you will find them being sold in big basins, nicely boiled and sprinkled with lemon, at the half-way station between Nicosia, Larnaca and Limassol called Skarinou. Before eating them you must cut them open and extract a tiny hard ball which is their stomach and is not edible. Otherwise you eat the whole bird as it is, as a meze, with some fresh local bread and a glass of brandy or wine ... you will also see them in jars of vinegar at most grocers'.

The consumption of ambelopoulia has always been big business. In autumn 1986, a woman in Paralimni told how she remembered that some 15 years ago her father, who owned a restaurant in Paralimni, used to invite 200-300 people to his restaurant at the peak of the ambelopoulia season. All these people then ate at least a dozen birds each, and 'in the days before the kitchen looked like a bird factory. Day in, day out, about 20 women were plucking thousands of birds that were brought in by the villagers.'

The export of birds, usually pickled in vinegar and packed in jars, was also common in earlier days. Quantities were exported to South Africa and Great Britain, where many Cypriots live. The scale on which this export took place is unknown, nor are there any data on prices of the exported jars. But considering prices of ambelopoulia in the island nowadays (see under Trade), the price for a jar of ambelopoulia bought in South Africa must have been extravagantly high.

Birds were caught in two ways: by limesticks and by mistnets. The use of limesticks is the oldest and most traditional practice; mistnets only became commonly used in recent years. For detailed information on both methods see under 'Liming' and 'Netting'. Both methods of catching birds are still used, though strictly prohibited under present Cypriot law (see under 'Wildlife Law' and Appendix III). Although bird-catchers are not formally united, there does seem to be an ambelopoulia-lovers lobby which has considerable political power. Some 15 years and more ago, the eating of birds undoubtedly was a very important additional supply of protein to the daily menu. Some individuals made a living from catching and selling birds in the autumn and spring, and in the periods between money was earned by such means as collecting snails in the hills. But nowadays, as many people assured me in 1986, people no longer earn their livelihood by catching and selling ambelopoulia. Cyprus is a rapidly developing country, including the provision of welfare services. Most of the limers observed in 1986 went to the liming-places in brand new 4-wheel drive vehicles. The birds which are caught by the use of limesticks or

mistnets are not in any sense pests either, so bird catching today cannot be excused by any socio-economic argument.

Bird-catchers are of course fanatic ambelopoulia eaters themselves, but a substantial percentage of the total catches will be sold to restaurants, since the birds make good money. C£0.50 per bird is the usual price (see also under 'Trade'). A number of catchers in the Paralimni area earn a considerable amount of extra pocket-money, derived from the selling of ambelopoulia.

In the ambelopoulia season many Cypriots may make several visits to well-known restaurants to eat ambelopoulia. The birds are then served grilled with bread, salad and wine. Every portion is a dozen birds, and costs C£10 (C£1 = £1.28 June 1987). In 1986, ambelopoulia were widely available in restaurants, both in the Paralimni area and further afield. Apart from grilling, birds are boiled and then pickled in vinegar and packed in jars. A dozen in a jar costs C£10. In the jars the birds can be kept for years, and many gourmets assured the author that the birds preserved in this way taste best after a year. These jars of ambelopoulia were seen on display in 1986 at grocers and in markets in Nicosia, Larnaca, Kakopetria, Paralimni and Gourri. Sometimes restaurants also sell the jars, as was the case in Paralimni and Gourri. One of the largest and best-known supermarkets in Nicosia did not sell jars of ambelopoulia any more, though it had in previous years.

LIMING

Liming is a traditional and long established method of bird-catching in Cyprus. The great numbers of migrating warblers, e.g. Sylviidae, entice many people to place limesticks. Autumn, especially September and October, has always been the most favoured period; the numbers of warblers passing through is immense and the birds are relatively fat, which makes them a worthwhile target. The Blackcap is considered the most popular prize, since it is one of the most numerous birds on autumn migration, and they can be extremely heavy. Weights of Blackcaps in this period are up to 31 grammes (Flint and Stewart 1983), which is sometimes nearly twice the weight on their breeding grounds. The birds build up fat reserves before and whilst migrating. For more information on bird species caught by liming, see under 'Species'.

The early morning hours are the most favoured period of the day to catch the birds. Most warblers are nocturnal migrants, newly arrived and therefore moving about in the bushes feeding during the first hours of daylight. Liming hardly ever takes place after 11 a.m., since at that time bird activity is minimal and furthermore, the lime would dry out. Very occasionally, limers will try again in the evening. In the most notorious liming country, Paralimni, where in the mornings hundreds of people go out for liming, on one evening in the peak season no limer could be observed.

Birds are caught when they alight on the sticks, and become gummed to the glue. Most birds are not held by their claws alone, but also by their tail and one or both wings when they thrash about. In some cases, the head is stuck to the limestick as well. The lime is extremely sticky, as can be illustrated by the case of a Barn Owl Tyto alba which was trapped on a limestick in October 1986. However, the lime is soluble in water, and birds can be carefully removed from limesticks by using some saliva.

Most limers are men, but in the Paralimni area, where liming is a sort of family business, many women (an estimated 25% of the total number of

limers there) can be seen placing limesticks and collecting birds. In the Paralimni area many children are also involved in catching activities by assisting their parents. In other parts of the island children were seemingly less frequently involved. Since the largest part of the catching season falls outside the summer holidays, most children are at school six days a week during the catching period.

The age distribution of limers was not assessed but, apart from the children, it appeared to cover a wide span with an equal number of young and middle-aged people participating.

Limesticks

Limesticks were made of pomegranate Punica granata branches about 75 cm in length, coated with a sticky substance made by mixing the fruits of Assyrian Plum Cordia myxa with honey. Assyrian plum trees could be found in many orchards, undoubtedly planted there because they provide the fruit required to make the lime. The author was also informed that sometimes the fruit is offered for sale in markets; there was no other use for the fruit apart from making lime. The pomegranate was widespread in Cyprus, but even so bunches of pomegranate twigs were sold in shops and markets, neatly cut to limestick-length, 24 costing C£0.85. Lime was not known to be sold separately, as it is for example in Italy (Taapken and van den Hoorn 1977). Bunches of limesticks could be bought in many places, especially in markets and petshops. Bunches of limesticks were seen on display in Nicosia, Larnaca and Limassol. A bunch of 24 limesticks cost C£15, and this high price explained why most people make the limesticks themselves.

The normal colour of a limestick was brown, but sometimes green sticks were found. This was due to the fact that the lime had been mixed with a green powder, to make them less conspicuous when they were placed in the bushes. During the investigations in 1986, only three instances of liming places were found consisting partly or fully of these green sticks.

At one time limesticks were also imported from Lebanon but, according to C. Papamichael (Head of Game and Fauna Services, Ministry of Interior) and P. Neophytou (COS 1970), that import has now been effectively banned. The traditional limestick basket was sold everywhere for C£3. In tourist areas, the baskets were marketed as umbrella stands.

Methods of liming

There were two ways of liming: totally passive and partly active. Passive in this respect means the limer placed his limesticks in the bushes, then he left and returned every now and then, to check for trapped birds. The limesticks could then remain at the same place for two consecutive days or longer. Sometimes the limesticks were collected the same day, and replaced the next morning.

Active liming was practised mainly in the Paralimni area. Limers placed their limesticks in the bushes between 30 minutes and two hours before sunrise. Then they started throwing stones into the bushes, shouting and clapping their hands to scare the birds towards the limesticks. On an October morning, during a walk in that area, hundreds of people were seen standing in the fields, carrying buckets with stones and shouting at the bushes! In this "driven" game-like method, limers sometimes arranged 'their' liming bush in such a way that birds scared from one end of the bushes were tempted to alight at the other end where all the limesticks were placed. Limers who practised the active liming method usually collected their limesticks about two hours after sunrise. In the case of

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passive liming, many birds died slowly after being trapped, since they hung upside down for hours or even days. In the case of active liming the birds were usually removed within 10 minutes.

Practically all the limers had their own liming-place. Year in and year out the same people appear at the same liming-place. It is not unlikely that certain families in Paralimni own good liming-places for generations in succession. Apparently there is even a trade in liming-places. One case is known in which a fig tree, particularly favoured by ambelopoulia, changed hands for more than C£5,000 (Flint and Stewart 1983).

The number of sticks used varied widely, depending on the liming-place. The limestick basket which was always used to carry the sticks held 4 sets of 24 sticks. During the investigations in 1986, no limer was observed using less than 30 limesticks. It seemed as if 'inland' limers mostly used somewhat smaller numbers of sticks than their colleagues in the coastal area of Paralimni. The numbers in use there were sometimes enormous; 300 sticks at one liming-place was not an exceptional sighting. For the Paralimni area, a mean of 150 sticks per liming-place was estimated; for the rest of the island the mean was around 60 sticks.

The number of people working a liming-place also varied. In the Paralimni area, some people were on their own, but more often two or three were active in one liming-place, and sometimes even four or five. In the rest of the island, limers were generally on their own. Single-handed limers rarely used more than one full limestick basket, but two people in one liming-place were able to use two or three baskets. The more people, the more limesticks that could be used, and the more effectively birds could be flushed towards the limesticks.

Liming-places were situated in various habitats. Many limers put their limesticks in citrus orchards; not so much in the citrus trees themselves as in isolated fig trees or vines in the orchard, or in a bordering hedge. Seemingly, migrating warblers did not favour large monotonous areas of citrus trees. Near Maroni, in an almost barren landscape, a limer distributed his sticks amongst many scattered bushes. In other places limesticks were placed on maquis-covered slopes. In general, limesticks were placed in bushes and shrubs not higher than 1.5-2 m. In the Paralimni region great quantities of suitable vegetation (like Acacia and Juniper) occurred, and these areas could be considered as the most popular liming areas. Fig trees were probably the most favoured trees by limers: Blackcaps were very fond of figs, and in September and October the overripe figs attracted many Blackcaps and thus limers.

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The area of a liming-place depended largely on the density and suitability of the vegetation; in an area with dense vegetation, one liming-place might not exceed 100 m². In the case of more scattered bushes, the total area might be 2500 m² (these are estimated figures).

Removing a bird from a limestick was mostly achieved by grabbing it by the body and then pulling it off. This often happened very violently and often tail and/or flight feathers remained on the stick. Occasionally even the legs remained on the stick: this was observed once in autumn 1986. Birds were killed instantly after being pulled off the limestick: as a rule, by strangling them by the throat. Only once during the investigations in 1986 was a limer seen to kill a bird by putting it in his mouth and biting it in the neck. This practice was also observed in spring 1986 by Tor Bollingmo (per Steinar Eldoy *in litt.* 1986). The birds were usually plucked at home the same day, but limers were sometimes seen plucking birds at the liming-place itself.

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The plucking and cleaning of the birds showed some variation. Generally, all feathers were plucked in the following order: wings, tail, body, head. Then, the abdominal wall was cut and the intestines were removed and the legs cut off. When the birds were going to be grilled and served immediately, or frozen to be grilled later, the head was not removed. When they were going to be pickled, the head and most of the wing-bones were cut off. Probably the intestines were not always removed, as in the case of pickled birds it was assumed that they may often be eaten as a whole, bowels and all.

A number of plastic bags containing feathers found in bushes at Cape Greco in autumn 1986 indicated that the bird-limers concerned used some kind of production line when plucking: one person cut off the legs and the wings, another person then plucked tail feathers and all body feathers. Taapken and van den Hoorn (1977) mention that the preparation of limed birds sometimes constitutes a cottage industry.

NETTING

Mistnets were introduced in the late 1960s and rapidly became common. They were much more destructive than limesticks, because the number of birds caught was much higher. Like limesticks, mistnets were illegal in Cyprus under Law 39/74.

Considering the large number of mistnets in use in the 1970s and 1980s (see later), it is likely that in this period mistnets almost completely took over from limesticks. This can be explained by the fact that many bird-catchers well understood the advantages of using mistnets instead of limesticks to catch birds: catches are much higher, and the amount of work required to operate mistnets is only a fraction of that of limesticks. Essentially, mistnets are left up all day, and thus erected only once every catching season. All the catcher has to do is to check his mistnets every now and then, and remove the birds caught.

In 1984 and previously, the number of mistnets in use was very high. No figures are available but, according to people questioned, thousands of nets could be found in many places. G. W. Rayner (COS 1957) and Adrian Akers-Douglas (FOE) stated that nets were erected in virtually a continuous line on both sides of the road from Paralimni to Cape Greco (Figure 3); many orchards were completely encircled by mistnets. Evidence of previous use of many nets was found in this area during the investigations in 1986. Andreas Demetropoulos (Cyprus Wildlife Society) stated that in the same area he had observed nets in use which were so large that special installations had been built using counter-weights and pulleys to erect the nets. FoE, reporting in Earthlines 14 (1985) on the 1984 situation, noted that new large nets (about 5 m tall and 10 m in length) were in use, and that in one place the trappers had become so greedy that they had even erected a net across a country road, blocking it for traffic. This greed can also be illustrated by the case of a mistnet found in autumn 1986 in the middle of Larnaca town, spanning an archaeological site!

In September 1986, whilst standing in a dry riverbed north of the village of Ayios Theodoros, amidst green orchards and tens of feeding Blackcaps and chattering Goldfinches, an inhabitant of that village told the author how such an abundance of birds would have been impossible in 1984 and previously, since then nearly every bird would have been trapped in a mistnet. The villager said that some people used as many as a hundred mistnets, and the whole valley (about 7 km in length) was covered with

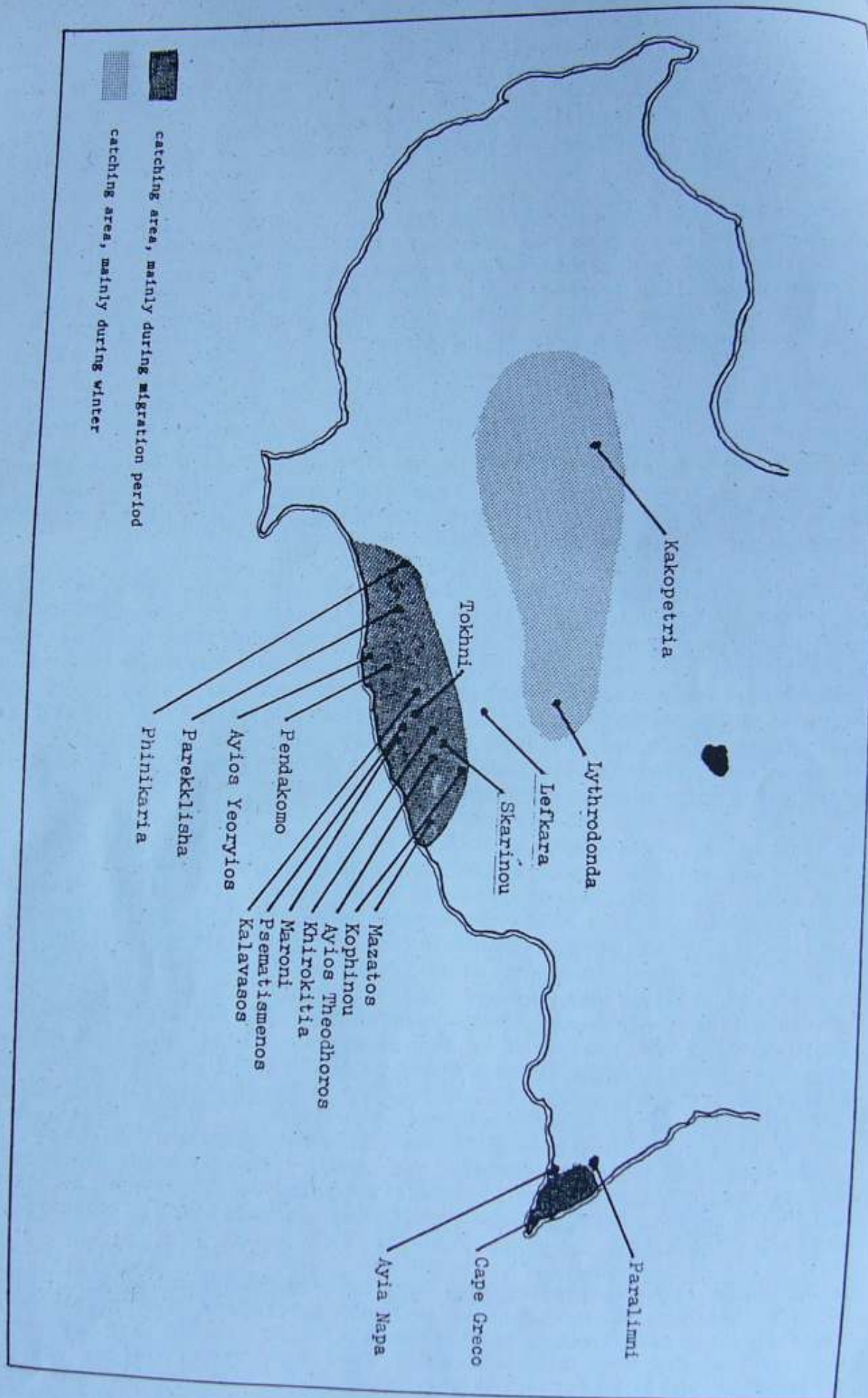


Figure 2: Cyprus, with main catching areas and areas investigated in 1986.

nets, rows of them stretching from one side of the valley to the other, thus creating an almost impassable barrier for birds.

Flint and Stewart (1983) reported that the thousands of nets used on the island, left up all day, every day, would kill a very high number of birds, probably as many, if not more, than are killed by liming. In contrast to limesticks, mistnets were sometimes the object of police action. For instance, in Paralimni 430 nets were seized in 1978, and 84 in one day in 1979 (Flint and Stewart 1983). These numbers only give a small indication of the scale on which nets were used. As will be shown in 'Investigations in the catching areas', the number of mistnets in use has declined greatly after the police action in 1985. However, mistnets could be found in 1986, and since it was assumed that mistnets were used for only one season, efforts were made in autumn 1986 to establish the origin of these nets. Banning the importation of mistnets was a crucial part of the Council of Ministers' Decision of December 1984. Investigations proved that mistnets were easily obtainable in a pet shop in Larnaca, for C£10 each: presumably other places offered them too. However, compared to previous years, the supply in shops in 1986 had declined considerably (P. Neophytou, Adrian Akers-Douglas). In November 1986, investigations did not succeed in finding out whether the nets on offer were the old (pre-1985) stock, or whether the suppliers managed to evade import controls. According to Andreas Demetropoulos, Head of the Fisheries Department and President of the Cyprus Wildlife Society, whose department is responsible for the control of imported (fishing-) nets, no mistnets were legally imported into Cyprus in 1986.

Methods of netting

As mentioned above, most mistnets are left up all day. In a few instances in 1986, trappers used mobile nets; after being used, poles and nets were rolled up. Perhaps this method was practised by catchers who did not own a suitable piece of land on which to erect their nets. In one case a trapper was seen using a mobile net and limesticks at the same time.

Most probably as a result of the police actions in 1985, mistnets used in 1986 were usually placed secretly, out of sight of the road. Often the nets were positioned in citrus orchards, two or three nets in a row to span the width of the orchard. Sometimes nets were erected more openly, across riverbeds or at right angles to a row of bushes.

The size of the mistnets found in 1986 was mostly 3 m tall and 12 m in length. Most trappers observed used three nets, sometimes four. Occasionally people erected just one mistnet in their orchard.

Generally, netting was practised in a 'passive' way; only rarely were trappers observed throwing stones and such like to flush the birds towards the nets. → NOV 18 OCT 20 1987

Netters mostly operated on their own, although occasionally two people were involved. The number of bird species caught in mistnets was higher than that caught by the use of limesticks. Since mistnets were mostly located in similar habitats to those in which liming took place, the same species were caught but, in addition, some species were caught which will hardly ever alight on a limestick, i.e. aerial and ground-living species like Swallows, raptors, and partridges.

Netting was a very cruel practice. Birds trapped at dusk were generally not removed until the next morning, and by then most of the birds had died after hours of suffering. In the long struggle to free themselves, many birds injured themselves, e.g. on an October morning in 1986, of six

swallows that had been trapped in a net the night before, two juveniles had died, and the other four birds showed bloody wounds on their wings and feet.

Some care is required to remove birds that have got tangled in a net, but obviously most trappers did not care and roughly pulled the birds out of the mesh. Numerous holes and many severed feet in the nets testified to this. The killing, plucking and further processing (e.g. selling and serving) of netted birds was identical to the process described under 'Liming'. Since nets and limesticks were used in similar ways, both practices could occur in the same locations.

CATCHING AREAS : A GENERAL ACCOUNT

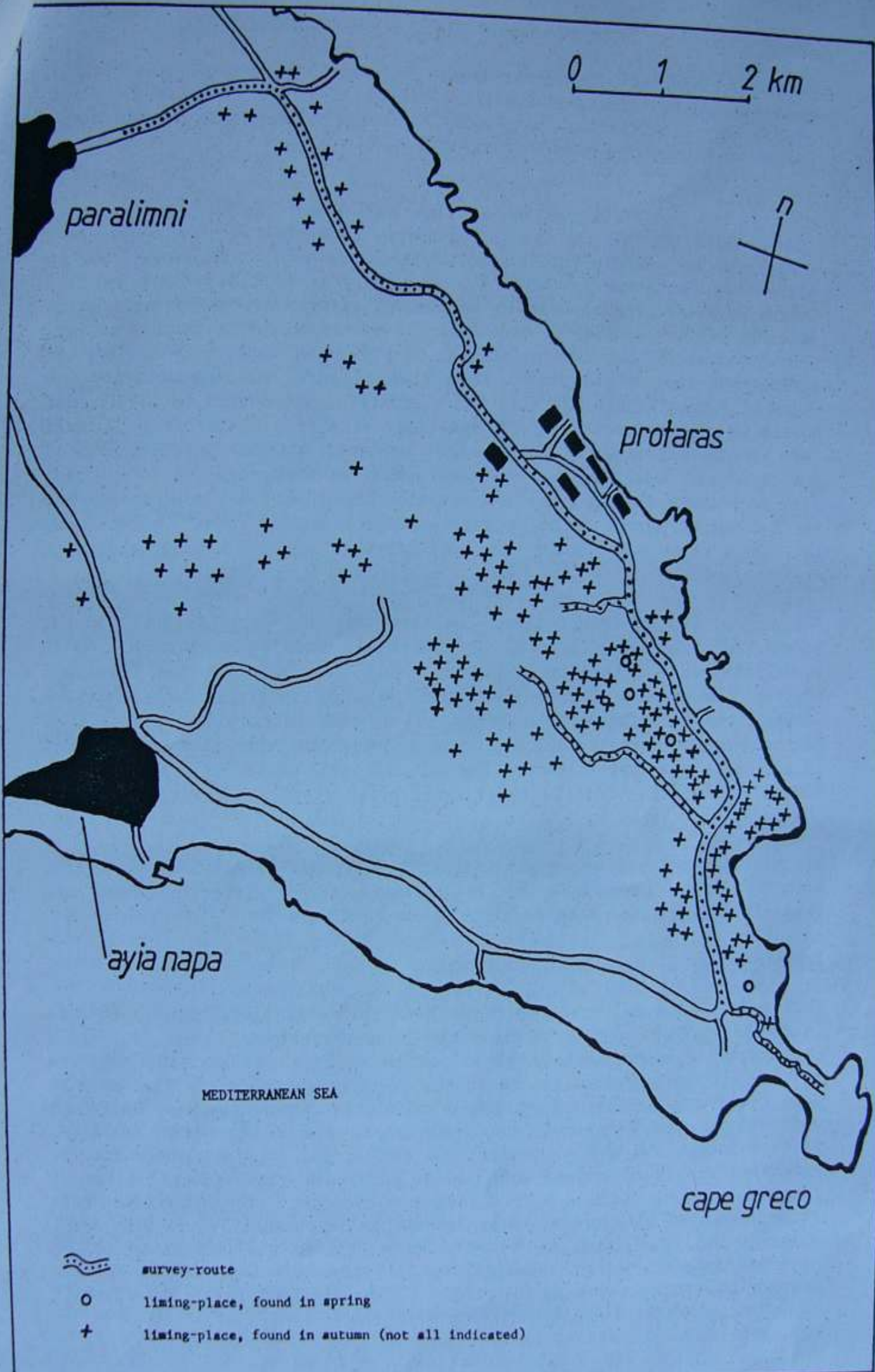
During the survey in 1986, special efforts were made to determine the overall distribution of catching in Cyprus. The coastal areas of Cyprus support the greatest numbers of migratory birds. In spring the birds coming from a south-easterly direction land on the first piece of land they see after their fatiguing non-stop flight over the sea. During the autumn migration, birds coming to Cyprus from the north try to get as far as possible across the island before leaving it to cross the Mediterranean. This causes dense concentrations of birds on the departure coasts. Therefore, the coastal regions, particularly in the south and south-east, have always been the main catching grounds in Cyprus. The most notorious part has always been around Paralimni, which for the purposes of this report, includes the triangle enclosed by Ayia Napa Cape Greco and Paralimni (Figures 2 and 3). Due to its geographical location and natural habitat, large numbers of migratory birds are attracted to this area in spring, and especially in autumn. Other well known places where catching takes place include some valleys along the south coast. The valleys generally run from north to south and provide food, water and shelter for birds on migration. One of these, the Ayios Theodoros valley, is the second best-known catching area in Cyprus (Figures 2 and 5). Other important valleys along the south coast are the Maroni/Psematismenos valley, Kalavastos valley and Yermasoyia/Akrounda valley. Liming was reported in autumn 1986 also from places like Ormidhia, Dhali and Nicosia.

Partly during the migration, but especially in winter, catching also takes place in mountainous areas. Kakopetria, in the Troodos Mountains, is well known for the catching of Spanish Sparrows in October, and in many places in the Troodos Mountains catching of Thrushes occurs from November to March.

It appeared that in the western part of Cyprus little bird catching occurs (Figure 2). Apart from one limer who was reported near the Paphos airport (C. J. L. Bennett pers. comm.), and another near Neokhorio in the Akamas Peninsula (A. Akers-Douglas pers. comm.), there was scarce evidence of catching: no limesticks, no ambelopoulia in jars. People questioned in Polis and Paphos even referred to Skarinou which is located near Ayios Theodoros, as a place to obtain ambelopoulia. Further eastward in Limassol some indication of the existence of catching was found, and it seems as if the main catching area only extends from Limassol eastwards.

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-  survey-route
-  liming-place, found in spring
-  liming-place, found in autumn (not all indicated)

CATCHING AREAS : DETAILED INVESTIGATIONS

Investigations into the magnitude and methods of bird-catching in Cyprus were carried out from 3-24 April and from 31 August-14 December 1986. In April, only the Paralimni and Ayios Theodoros regions were investigated. In autumn many more places were covered (Table 1).

Some of the localities on Table 1 are well-known catching areas; other places, like Lefkara and Ayios Theodoros, were visited as a consequence of information received privately. Spot-checks were often carried out in places not mentioned in Table 1. For example, in the western part of Cyprus bird-catching appears to be minimal after numerous spot-checks in suitable habitats and after questioning a number of people in that region. Investigations of the kind undertaken in 1986 meant constantly looking for indications that might reveal some kind of bird catching activity. A drive of approximately 60 km in the vicinity of Kakopetria in the Troodos Mountains revealed tens, if not hundreds, of places where mistnets could have been placed or where liming could have been practised, but nothing of that kind was detected. An enormous amount of such negative information does contribute to the overall impression and thus final conclusion, but space does not permit it to be incorporated into this report. Therefore, in Table 1 and the following text only sites selected for their importance are assessed.

The easiest way to detect limers is when they are going to their liming places, or when they return, in the early morning; therefore, most investigations started half-an-hour before sunrise. In the Paralimni region, limers were easily discovered as they were generally throwing stones, and shouting at the birds or at each other. The presence of mistnets can be detected all day long, but searches were also concentrated in the early morning. Later on the day, mistnets could be located (using binoculars) looking for the poles which often stood out above the tops of the trees and bushes.

All places mentioned below are indicated on Figure 2. Bird species which were found on limesticks or in mistnets during investigations, are summarised in a later section of this report (Table 5).

Paralimni

This region is considered the prime bird-liming area of Cyprus: it lies in the triangle between Ayia Napa-Cape Greco-Paralimni (Figure 3), with a total area of approximately 40 km². The village of Paralimni nowadays extends all the way down to the coast. On the coastal strip southward to Cape Greco are hotels and apartment complexes. Between these buildings and west of the Paralimni-Cape Greco road, are a number of orchards. Further inland, on the slopes of the plateau and on the plateau itself, extensive stands of maquis and garique alternate with isolated areas of farm-land and orchards. Near Cape Greco lies the Ayia Napa minor State Forest, an area with trees and bushes not taller than 1.5-2 m. The rocky extremity of Cape Greco is occupied by a British military site and the serials of Radio Monaco. The village of Ayia Napa is the most rapidly developing tourist area on Cyprus, and the hotel complexes are steadily creeping eastwards along the coast towards Cape Greco.

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Place	Spring -April	Autumn			
		September	October	November	December
Paralimni	10,11,12 18,19	9,10,11, 12,23,30	1,7,12, 18,19,24	5,10,17	
Mazatos			27		
Kophinou			2		
Ayios Theodoros	17,18	2,4,6,15 21,22	3,10,19	1,8	
Skarinou				1	
Khirokitia			2,10,13	1,14	
Maroni		7,19,30	3,14,15, 17,23	8,25	6
Psematismenos		5	6,13,16	7	8
Tokhni				9	
Kalavassos			8,9,13	5,14	
Pendakomo		13			
Ayios Yeoryios			21,23		
Parakklissha			31		
Phinikaria				3,8	
Lefkara		14,21			
Kakopetria			28,29,30		
Lythrodonda				22	9

Table 1: Investigated areas and investigation dates in 1986.

In spring 1986, the Paralimni area was investigated on 10, 11 and 12 April, and again on 18 and 19 April. On these five dates, just over 100 limesticks were found at four different locations, with 12 trapped birds. The locations are indicated in Figure 3. The limed birds were all released. The small number of active limers was considered very encouraging. Although less favoured than autumn, spring had always been a good catching season; 'all round me I heard the rustling of the wings of the dying birds that were trapped on the sticks. The bushes were covered with sticks' (S. Woldhek on a visit to Paralimni on 14 April 1979). And in 1968, between 5 March and 12 May, people from Paralimni brought 25,004 birds to Hubbard et al. No mistnets were seen in spring 1986.

In autumn 1986, the Paralimni area was investigated on many dates (Table 1). On most of these dates a 'survey-route' was investigated, which led from Paralimni village to Cape Greco (Figure 3). Two short turn-offs from that road also formed part of the survey-route. Some 10 km² could be examined whilst driving the route, and active limers easily counted. The maximum number of liming places in use counted on the survey-route was 119 on October 18th. The course of liming activity for the whole area was based on the data gathered on this route (Figure 4). On the basis of investigations in the rest of the Paralimni region, the total number of liming places was estimated at 270-300. This represented up to 1000 people occupied in liming every morning. The average number of sticks per

liming place was 150, which meant that for a period of at least five weeks, every morning up to 45,000 limesticks were placed in the bushes of the Paralimni area alone.

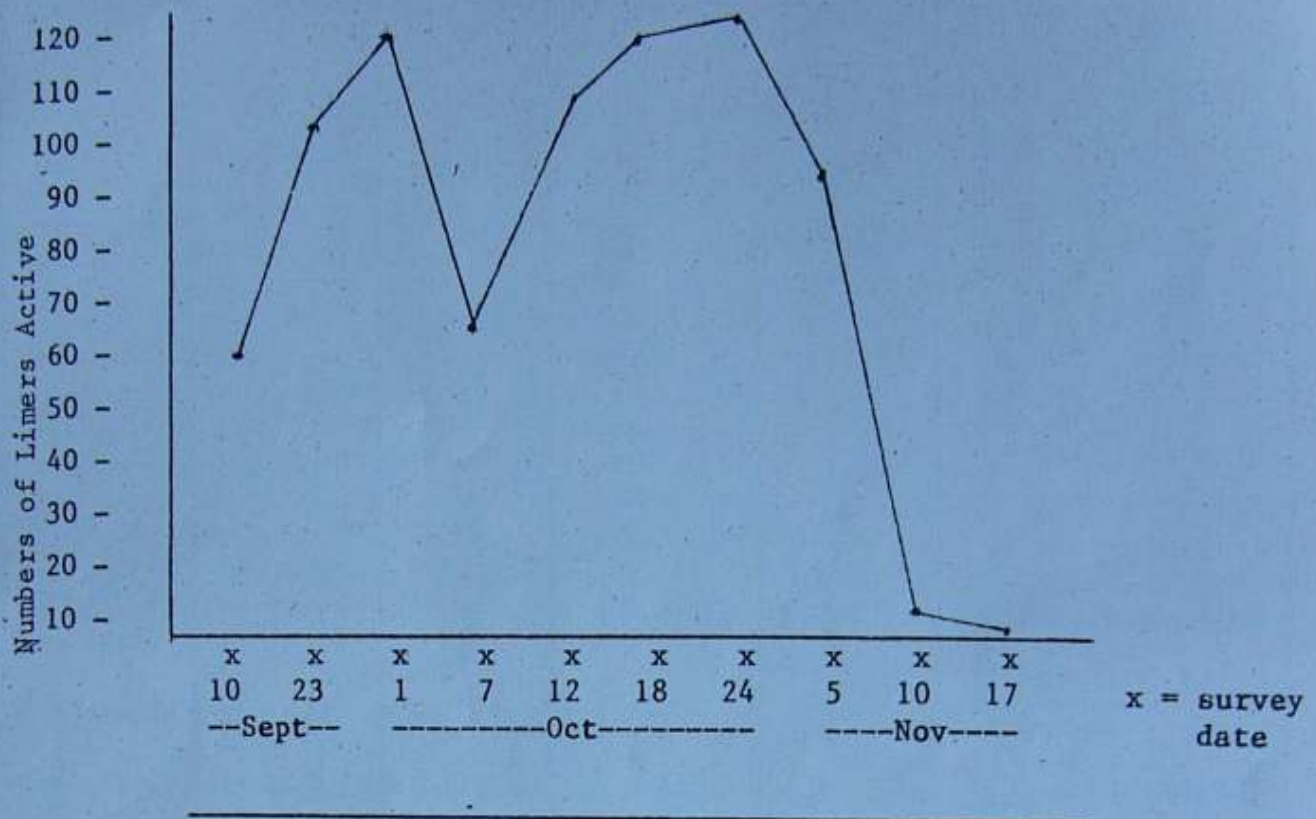


Figure 4:: Liming activity along the Paralimni survey route, autumn 1986. (see Figure 3)

The behaviour of the limers was mostly blatant. In some places, notably in the touristic Protaras area, liming was practised in the grounds of hotels. Apparently, no tourists complained of noise from shouting people and low flying stones at 6 a.m.! Limers often resented the presence of outsiders near their liming places, probably because they associate opposition to their catching (e.g. netting, see below) with foreigners. More than once the investigator was turned away by limers from 'private property', even when this was the middle of the (public) Ayia Napa minor State Forest.

It was striking that, as in spring, no mistnets were found in Paralimni in autumn 1986. In many places metal bars, set in concrete, were found, to which the mistnet poles used to be fastened. In one place holes in which poles could be inserted were even found drilled in rock and under a nearby bush lay abandoned rusty metal mistnet poles. All this obviously indicated that, as also stated by many observers, mistnets were previously widely used in this area. The complete abandonment of mistnets by catchers here was undoubtedly the result of police actions in 1985. Moreover, the Paralimni area has changed dramatically in recent years: together with nearby Ayia Napa, Paralimni is rapidly developing into one of the major tourist centres in south-eastern Cyprus (Friends of the Earth Cyprus Earthlines 16, 1986). This has led to better standards of living so it seems that local people were less reliant upon the sale of birds to supplement their income. This may explain a 'natural' decline in catching activities, resulting in a diminution of catching in spring, which has anyway never been the main season. It was however, also possible that the

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number of birds available in spring 1986 was low and that this was the main factor causing the reduced level of catching; the decline may, therefore, be only temporary.

During autumn 1986, conservationists intervened after it had become clear that liming was taking place on a very large scale in Paralimni. However, a telex from ICBP to the President of Cyprus, a telegram from the Dutch Bird Protection Society to the Chief of Police in Nicosia, and letters from local conservationists to various responsible people in government did not result in any action by the police.

Mazatos and Kophinou

These sites were investigated on 27 and 2 October respectively. In the vicinity of both villages hardly any suitable catching habitat was present. Near Mazatos, beside the Pouzis riverbed, four recently abandoned mistnets were found in an orchard.

Ayios Theodoros

'Ayios Theodoros' in this report includes the valley that runs from the Nicosia-Limassol highway southward to the sea, via the village of Ayios Theodoros (Figure 5). The valley is about 7 km in length, and is covered with citrus orchards which provide food and shelter for migrants. This area is considered by many conservationists to be the second most notorious catching area in Cyprus after Paralimni. The references to Skarinou in Sitas' 'Kopiaste' (1974) and by people questioned in western Cyprus in fact refer to Ayios Theodoros, as birds caught in the Ayios Theodoros valley are often sold and served in nearby Skarinou which is situated next to the Nicosia-Limassol road.

In spring 1986 the valley was investigated on 17 and 18 April, by driving down the road to the sea and making several walks in the orchards. No limesticks or mistnets were found. A local restaurateur informed the author that thanks to 'foreigners' the authorities had stopped the netting here, but that the Police would usually still close their eyes to the use of limesticks. The restaurateur predicted that the villagers would catch ambelopoulia in autumn, secretly on their own pieces of land, and that he would serve ambelopoulia, but under a false name on the menu.

In autumn 1986, the valley was investigated on six dates in September, three dates in October and two dates in November. On 2, 4 and 6 September, a substantial part of the valley was searched on foot; on the following dates generally the north-south road via the village, from the highway to the sea or vice versa, was searched. Liming was practised only on a small scale in Ayios Theodoros. The first liming activity was noted on 21st September, when three men accompanied by their sons were seen liming in the south of the valley. One of the boys carried a bunch of Blackcaps. From then on liming was recorded up to 8 November, when only one limer was active. Liming was only carried out south of the village, maximum activity was noted on 19 October when nine cars belonging to limers were counted. On one occasion four limers cooperated in one liming place: all the liming-places are indicated in Figure 5. Only seven mistnets were found during the autumn investigations. All these nets were placed very secretly and only found after long searches on foot. In one place, four nets were erected in an orchard; on 6 September four birds were found and released from these nets, and the same happened on 10 October. The northern part of the valley, north of the Nicosia-Limassol highway, was investigated on 2 October, but this part was barely cultivated and provided hardly any suitable catching habitat.

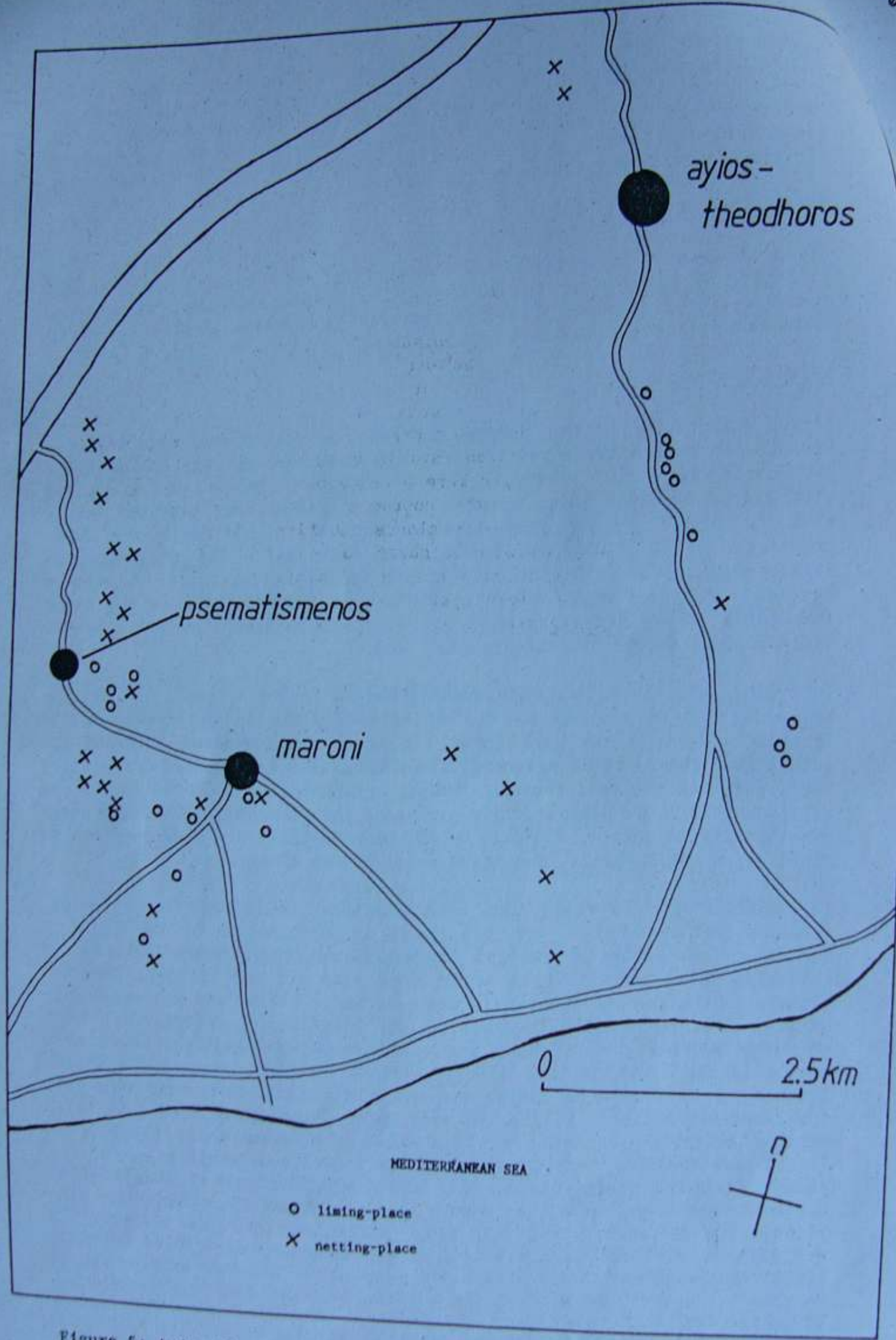


Figure 5: Ayios Theodoros area, with netting and liming-places in 1986.

One should take into account that the Ayios Theodoros valley is literally covered with orchards, and that the total area is too large to investigate completely on foot. However, the area which was thus investigated is estimated at 50% of the total area, so probably only a few mistnets could have been overlooked. Bird-catching activities in this valley in 1986 were generally low compared to former years. In previous years, birds were sold on the roads by young boys (Adrian Akers-Douglas pers. comm.), and the reputation of this area is also demonstrated by the Ambelopoulia festival which was organised in Ayios Theodoros on 11 October 1986. Police were on duty at this 18th Ambelopoulia festival, where over 500 people enjoyed grilled ambelopoulia and where there was even a contest for Miss Ambelopoulia! It was unlikely that the thousands of birds required for this festival had all been caught in the vicinity of Ayios Theodoros as the catching activity seemed low: birds were probably brought in from the Paralimni region.

It was obvious that bird-catching, notably by the use of mistnets, had greatly decreased in the Ayios Theodoros region. Undoubtedly this was due to the Police actions carried out in 1985, although no detailed records on these actions could be obtained. An inhabitant of Ayios Theodoros told the author that Policemen from the Anti-poaching Unit dressed like tourists and use hired cars in order to catch bird-trappers red-handed, and that 'many' people were prosecuted and fined. Such fines were usually derisory since in the course of the catching-season the income from birds sold could easily balance the fine. Nevertheless, the action of the Police deterred most catchers so that they abandoned their mistnets, and after that, apparently only a small percentage went back to the traditional practice of liming, although it appeared that the valley has never been a main liming area as it seems more suitable for the use of mistnets.

Skarinou and Khirokitia

Both these sites have only a few areas with suitable catching habitat. Skarinou is situated in a landscape with mainly carob and olive trees, and on 1 November one man was seen using mistnets. A little westward, just south of Khirokitia, a few orchards were investigated on three dates in October and two dates in November. This revealed a torn net in one orchard on 2 October. A follow-up investigation there on 1 November showed a new 12 m net with a trapped Blackcap; in another orchard two pairs of mistnet-poles were found together with a heap of feathers where a catcher had been plucking birds. Three other orchards did not show any catching activity. *5 nets*

Maroni

Together with nearby Psematismenos (see below) this area turned out to be one of the worst affected areas, especially by mistnets. Maroni in this respect includes the Maroni-valley south of the Psematismenos-Maroni road, down to the sea. The valley, of approximately 2.5 km length, is for the greater part occupied by citrus orchards. It was investigated on three dates in September, five dates in October, two dates in November and one date in December. Searches were carried out on foot. Liming was recorded from 20 September onwards, with most activity in October. At the end of the investigation period, mid-December, one limer was still going out for Thrushes, Robins and Stonechats, and in another spot a permanent liming place was arranged containing some 40 sticks. In the course of the catching-season, up to seven different men were involved in liming, one of those concerned being the 'papas' of the village, the local priest. Two of the limers were often accompanied by their sons, and they occasionally erected a mistnet whilst the liming was carried out. Liming was practised

mainly in shrubberies and orchards in the vicinity of the village, but a single liming-place was positioned about 1 km south of the village. In the course of the investigations a number of birds were released from limesticks. Liming-places are indicated in Figure 5.

Mistnets were, as previously stated, commonly used in the Maroni valley. During investigations in the area a total of 40 mistnets were found (Figure 5). Considering the area investigated on foot and the total area, the total number of mistnets in use in the Maroni region was estimated at 50-60. On one occasion, four mistnets in a fenced orchard were confiscated by the Police after they had been informed, but the owner of the nets was not arrested. Some four weeks later the catcher erected new nets in the same place.

Two mistnets in an olive grove near the sea were checked regularly after they had been discovered on 8 November, when they contained three dead Robins and one dead Chiffchaff, another Chiffchaff and a Blackcap were released alive. These nets provided information on bird-species caught in nets and the number of birds found dead in the nets clearly demonstrates how birds suffer and die slowly when the nets are left up all day.

Psematismenos

Comprising that part of the Maroni valley from the Nicosia-Limassol highway southward to the Psematismenos-Maroni road, Psematismenos was investigated on one date in September, 3 dates in October, one date in November and one date in December. The valley, approximately 1.5 km in length, was mainly occupied by orchards. Together with Maroni, this valley turned out to be an important netting area. In all, 27 mistnets were found, and for the total area it was estimated that 30-40 nets were in use (Figure 5). An effort was made by conservationists to get the police to clear nets from the valley, and requests were sent to the Kalavassos police and the Chief of Police in Nicosia. No action was taken, however, and catching took place continuously until the first week of November. Liming was mainly concentrated on the southern end of the valley. The maximum number of active limers was 4, of which one used limesticks and a mistnet simultaneously. The limers here practised the active variant of liming. Half-way down the valley was one permanent liming-place: a fig tree strewn with some 30 limesticks.

Tokhni and vicinity

This site was investigated on 9 November after it had been mentioned in a hunting magazine that mistnets had been used commonly here. Although this investigation may have taken place a little late in the catching season, it seemed that the information in the hunting magazine was inaccurate as no mistnets were seen and little suitable catching habitat appeared to be available.

Kalavassos valley

This extended from the Nicosia-Limassol highway northwards to the village of Kalavassos, and about 1 km beyond. The valley was not very wide and had orchards alternating with small areas of farm-land. It was investigated on three dates in October and two dates in November. One permanent liming-place was found on 8 October; on 9 October this was inspected again and then contained three glued Blackcaps and two House Sparrows. A total of five mistnets was found in Kalavassos valley. Two of these were erected in a orchard less than 100 m from the police station. By 14 November, all the mistnets had been abandoned.

Pendakomo and vicinity

This area was investigated on 13 September, after the author had been informed that people had been seen preparing limesticks there. No bird-catching activities or preparations for that purpose were in fact detected, and since the village is situated in an almost barren landscape, any catching activity here must have been very low.

Ayios Yeoryios

A monastery in a small barren valley south-west of Pendakomo, this site was investigated twice in October after ornithologists had reported a bird-limer. Further investigations revealed two netters, each of them using at least two mistnets which were erected across a dry riverbed.

Parekklissha

This site was investigated on the afternoon of 31 October after a rather vague tip-off. The area comprised an extensive, flat area mainly of farmland and a few scattered orchards, without much relief. Birds would have crossed such an area without converging, making it unlikely that catching was practised on a large scale. However, in one orchard two metal bars used to fasten mistnet-poles were found.

Phinikaria

Situated in the Yermasoyia valley which ran from Akrounda some 7.5 km southward to the sea, the area is taken up by a large dam and plots of farm-land and orchards. Spot-checks in this valley were carried out on 2 and 8 November after the author had been informed that catching was practised here. In the southern part, up to the dam, no mistnets or limesticks were found. Around the village of Phinikaria itself, however, six mistnets were detected without great difficulty in part of an area with many private and often fenced orchards. Given the high suitability of the area for bird-catching, the actual number of mistnets in use was probably much higher.

Lefkara and surroundings

Situated at an altitude of 500 m, the hillsides in this area were taken up with orchards and plots of farmland. The area was inspected on 14 and 21 September but no bird-catching was noted.

Kakopetria

This site is located in the Troodos Mountains at an altitude of 800 m. The road from the village leads southwards through the Karvounas pass, the geographical structure of which causes strong convergence of migratory birds moving south. This pass had a notorious reputation in respect of bird-catching, notably of Spanish Sparrows during October. 15,000 were killed on limesticks in late September and October 1974 (COS 1970, 5th annual report, in Flint and Stewart 1983). Two ornithologists who were resident near Kakopetria informed the author that prior to 1985 mistnets were widely used in the Karvounas Pass, with concentrations just south of Kakopetria near the stream and opposite the turn-off to Spilia. Mistnets were also erected in many places in the whole area, on slopes and in riverbeds. But, in 1985 and 1986, they had hardly seen any catching activity in the area.

Investigations in the region were carried out on 28, 29 and 30 October. On these dates seven different limers were detected working in the

Karvounas Pass. No mistnets were found in the Pass, nor anywhere in the whole region. Frozen ambelopoulia were sold in a hotel and a shop in Kakopetria: the corpses were tentatively identified as sparrows. The Karavounas Pass was not very easy to survey, so that a substantial number of liming places/limers may have been overlooked during investigations in October 1986. However, it was obvious that the use of mistnets has greatly declined, if not completely ceased compared with previous years. No information on police actions could be obtained from the Kakopetria Police Station. One should take into account that, as stated by the resident ornithologists, local people had been complaining about a lack of birds in this area for the last year, so it may be that the low level of catching was only temporary.

Lythrodonda region

This is often mentioned as an area in which many thrushes are caught during winter (M. A. Charalambides pers. comm., Woldhek 1980). The area was inspected on 21 November and again on 9 December, but no bird catching was recorded. Numbers of thrushes seen during investigations seemed low: only up to 20 on 9 December. On account of the fact that in late November in many places in the Troodos Mountains bunches of thrushes (mainly Song Thrushes, some Blackbirds) were offered for sale, it is obvious that thrushes occur in the whole Troodos region and it appeared that liming of thrushes was not confined to the Lythrodonda area alone, but occurred in the whole mountainous region, with perhaps a concentration around Lythrodonda.

CATCHING SEASON

Catching is, in fact, being practised all the year round. In autumn, catching starts as early as August and lasts through September, October and November. Winter-catching takes place from November up to and including March, and in March, April and May spring-catching occurs. From April till July some people go out to catch breeding birds such as Goldfinches and Calandra Larks, for the caged bird trade, but this only happens on a small scale.

The course of autumn liming in the Paralimni area in 1986 can be illustrated by data gathered on a 'survey-route' (Figures 3 and 4) which was investigated almost weekly from 10 September till 17 November. The maximum number of limers active on that route was 119 on October 18th. The low numbers of limers active in the first ten days of October can be explained by the occurrence of a short cold spell (mainly strong wind). In the first week of November, a cold front causing hail showers moved across Cyprus, and this apparently signalled the end of the autumn liming season. For detailed information on weather conditions see Appendix IV.

From the Figure 4 it appeared that the main catching period in the Paralimni area in 1986 started in the last ten days of September and lasted for approximately five weeks until the second week of November. During that time limers would have been active every day. This catching period coincides with the peak migration for Blackcaps as given by Flint and Stewart (1983). Note that Figure 4 only bears upon the situation in the Paralimni area, in the south-east of Cyprus. In the first week of September people were also seen making preparations in other catching areas (Ayios Theodoros, Kalavassos, Lefkara) indicating that the main catching period all over the island starts just after mid-September. After the first week of November, when the liming activity in Paralimni had declined, it also decreased in other places and people abandoned their mistnets. It appeared likely that the start of the autumn catching period

was mainly traditional, but that the end was very variable as it was partly determined by the weather conditions. It is also important to realise that weather conditions influence the migration itself: optimum weather conditions permits more rapid migration so that the bulk of some species pass through in a much shorter period than usual. Bad weather, on the other hand, may cause a delay in migration. Since catchers naturally respond to the number of birds available, it may well be that in one year the autumn catching season lasts for six weeks, and in another year for nine weeks.

The duration and timing of the main catching season in spring are not easy to determine. From 5 March to 12 May 1968, people from Paralimni brought 25,004 limed birds to Hubbard et al., who did a survey on limed birds (Hubbard 1982). Investigations in spring 1986 suggested that the catching in spring had probably declined. With no further information on the spring catching season available, it seems likely the last ten days of March and the whole of April can be considered the main spring catching-season.

SPECIES CAUGHT

Many species of birds were trapped with limesticks or mistnets. Most of the information presented here on species caught on limesticks was derived from the list published by Hubbard in the 1976 report of COS (1970). Hubbard participated in a study of the transmission of viruses and ectoparasites by migratory birds for which purpose limed birds were bought from limers in Paralimni.

Between 5 March and 12 May 1968, trappers brought in 25,004 birds of 100 species.

Little Bittern	<u>Ixobrychus minutus</u>	1
Squacco Heron	<u>Ardeola ralloides</u>	2
Pallid Harrier	<u>Circus macrourus</u>	1
Sparrowhawk	<u>Accipiter nisus</u>	2
Lesser Kestrel	<u>Falco naumanni</u>	6
Kestrel	<u>Falco tinnunculus</u>	37
Merlin	<u>Falco columbarius</u>	1
Hobby	<u>Falco subbuteo</u>	2
Quail	<u>Coturnix coturnix</u>	1
Water Rail	<u>Rallus aquaticus</u>	1
Little Crake	<u>Porzana parva</u>	1
Stone Curlew	<u>Burhinus oedicephalus</u>	1
Turtle Dove	<u>Streptopelia turtur</u>	84
Cuckoo	<u>Cuculus canorus</u>	156
Great Spotted Cuckoo	<u>Clamator glandarius</u>	13
Barn Owl	<u>Tyto alba</u>	2
Scops Owl	<u>Otus scops</u>	136
Little Owl	<u>Athene noctua</u>	3
Long-eared Owl	<u>Asio otus</u>	1
Short-eared Owl	<u>Asio flammeus</u>	2
Nightjar	<u>Caprimulgus europaeus</u>	6
Bee-eater	<u>Merops apiaster</u>	3
Blue-cheeked Bee-eater	<u>M. superciliosus</u>	1
Roller	<u>Coracias garrulus</u>	22

Hoopoe	<u>Upupa epops</u>	
Wryneck	<u>Jynx torquilla</u>	
Skylark	<u>Alauda arvensis</u>	
Woodlark	<u>Lullula arborea</u>	
Crested Lark	<u>Galerida cristata</u>	
Bimaculated Lark	<u>Melanocorypha bimaculata</u>	
Swallow	<u>Hirundo rustica</u>	
Red-rumped Swallow	<u>H. daurica</u>	
Yellow Wagtail	<u>Motacilla flava</u>	
White Wagtail	<u>M. alba</u>	
Tawny Pipit	<u>Anthus campestris</u>	
Meadow Pipit	<u>A. pratensis</u>	
Tree Pipit	<u>A. trivialis</u>	
Red-throated Pipit	<u>A. cervinus</u>	
Water Pipit	<u>A. spinoletta</u>	
Red-backed Shrike	<u>Lanius collurio</u>	
Lesser Grey Shrike	<u>L. minor</u>	
Woodchat Shrike	<u>L. senator</u>	
Masked Shrike	<u>L. nubicus</u>	
Rufous Bushchat	<u>Cercotrichas galactotes</u>	
Robin	<u>Erithacus rubecula</u>	
Thrush Nightingale	<u>Luscinia luscinia</u>	
Nightingale	<u>L. megarhynchos</u>	
Black Redstart	<u>Phoenicurus ochruros</u>	
Redstart	<u>P. phoenicurus</u>	
Whinchat	<u>Saxicola rubetra</u>	
Stonechat	<u>S. torquata</u>	
Isabelline Wheatear	<u>Oenanthe isabellina</u>	
Common Wheatear	<u>O. oenanthe</u>	
Black-eared Wheatear	<u>O. hispanica</u>	
Finsch's Wheatear	<u>O. finschii</u>	
Cyprus Wheatear	<u>O. cyprica</u>	
Rock Thrush	<u>Monticola saxatilis</u>	
Blue Rock Thrush	<u>M. solitarius</u>	
Blackbird	<u>Turdus merula</u>	
Song Thrush	<u>T. philomelos</u>	
Fieldfare	<u>T. pilaris</u>	
Savi's Warbler	<u>Locustella luscinioides</u>	
Sedge Warbler	<u>Acrocephalus schoenobaenus</u>	
Reed Warbler	<u>A. scirpaceus</u>	
Great Reed Warbler	<u>A. arundinaceus</u>	
Icterine Warbler	<u>Hippolais icterina</u>	
Olive-tree Warbler	<u>H. olivitorum</u>	
Olivaceous Warbler	<u>H. pallida</u>	
Barred Warbler	<u>Sylvia nisoria</u>	
Orphean Warbler	<u>S. hortensis</u>	10
Garden Warbler	<u>S. borin</u>	
Blackcap	<u>S. atricapilla</u>	39
Whitethroat	<u>S. communis</u>	6
Lesser Whitethroat	<u>S. curruca</u>	53
Rüppels Warbler	<u>S. ruppellii</u>	4
Sardinian Warbler	<u>S. melanocephala</u>	
Cyprus Warbler	<u>S. melanothorax</u>	
Subalpine Warbler	<u>S. cantillans</u>	63
Spectacled Warbler	<u>S. conspicillata</u>	6
Willow Warbler	<u>Phylloscopus trochilus</u>	67
Chiffchaff	<u>P. collybita</u>	467

Table 2 Contd.:

Bonelli's Warbler	<u>P. bonelli</u>	181
Wood Warbler	<u>P. sibilatrix</u>	21
Fan-tailed Warbler	<u>Cisticola juncidis</u>	20
Flycatcher complex	<u>Ficedula sp. consisting</u> of <u>F. semitorquata</u> , <u>F. albicollis</u> and <u>F. hypoleuca</u>	570
Spotted Flycatcher	<u>Muscicapa striata</u>	172
Great Tit	<u>Parus major</u>	29
Corn Bunting	<u>Emberiza calandra</u>	80
Ortolan Bunting	<u>E. hortulana</u>	39
Cretzschmar's Bunting	<u>E. caesia</u>	70
Black-headed Bunting	<u>E. melanocephala</u>	24
Chaffinch	<u>Fringilla coelebs</u>	5
Greenfinch	<u>Carduelis chloris</u>	2
Goldfinch	<u>C. carduelis</u>	56
Linnet	<u>C. cannabina</u>	15
House Sparrow	<u>Passer domesticus</u>	357
Spanish Sparrow	<u>P. hispaniolensis</u>	18
Golden Oriole	<u>Oriolus oriolus</u>	34

Table 2: Species procured by Hubbard (1982) from bird-limers around Paralimni, spring 1968.

Hubbard et al. (1967) published a list of species taken by limers during September–November 1967. This list contained only 66 species as the autumn investigation was not as comprehensive as the following one in spring 1968. However, the 1967 list added 11 species to the list as presented in Table 2 (see Table 3).

Table 4 lists species mentioned by Flint and Stewart (1983) to be caught on limesticks.

Red-footed Falcon	<u>Falco vespertinus</u>
Moorhen	<u>Gallinula chloropus</u>
Spotted Crake	<u>Porzana porzana</u>
Kingfisher	<u>Alcedo atthis</u>
Short-toed Lark	<u>Calandrella brachydactyla</u>
Dunnock	<u>Prunella modularis</u>
Red-breasted Flycatcher	<u>Ficedula parva</u>
Ring Ouzel	<u>Turdus torquata</u>
Serín	<u>Serinus serinus</u>
Hawfinch	<u>Coccothraustes coccothraustes</u>
Starling	<u>Sturnus vulgaris</u>

Table 3: Species procured by Hubbard (et al.) in autumn 1967, additional to those listed in Table 2.

Sand Martin	<u>Riparia riparia</u>
Marsh Warbler	<u>Acrocephalus palustris</u>
Bearded Tit	<u>Panurus biarmicus</u>
Red-fronted Serin	<u>Serinus pusillus</u>
Redpoll	<u>Carduelis flammea</u>
Trumpeter Finch	<u>Bucanetes githagineus</u>
Pine Bunting	<u>Emberiza leucocephalus</u>
Yellow-breasted Bunting	<u>E. aureola</u>
Rock Sparrow	<u>Petronia petronia</u>

Table 4: Species reported to be caught on lime-sticks by Flint and Stewart (1983) further to tables 2 and 3.

More species were caught by netting than liming, and for some species already on the 'liming-list', numbers caught in mistnets are undoubtedly much higher, especially aerial and ground-dwelling species like Swallows, raptors and partridges: a cover of a Cypriot hunting magazine once depicted a Chukar dangling in a mistnet. A policeman in Paralimni said mistnets often trapped 'big birds which were very skinny and thus unfortunately not edible', but no further detailed information on species caught in mistnets could be obtained.

During the investigations in 1986, 26 bird species were found in mistnets or on limesticks, with a total number of 813 birds involved (Table 5). Much information on species came from the contents of some 20 large plastic bags found in a bush at Cape Greco. The bags contained the remains of thousands of birds caught on limesticks and plucked afterwards. 691 pairs of wings were separated from an enormous amount of down, and these remains were then kindly identified by Rob Bijlsma, helped by Kees Roselaar (Zoological Museum, Amsterdam). Over 97% of these remains consisted of Blackcaps, although Blackcaps only constituted 36% of the total of birds trapped elsewhere.

As Table 5 indicates 65 birds were released in good health after being rescued from a limestick or a mistnet. The Calandra Lark was the only species caught in addition to those found in the lists of Hubbard (1967, 1982) and Flint and Stewart (1983), bringing the total to 122 species which are known to have been caught by limesticks or mistnets. Live Calandra Larks were offered for sale in a petshop at Larnaca for C£15 each, and were said to have been caught on limesticks somewhere in the Famagusta district. Calandra Larks were considered to be good songsters.

Although the 1986 investigations found only 26 species of bird caught on limesticks or in mistnets, it is highly likely that the actual list of species trapped in Cyprus consists of at least the 122 species presented in Tables 2, 3, and 4.

Species	A	B	C	D	Notes
Barn Owl <u>Tyto alba</u>	1	1	-	-	Alive in hands of limer
Roller <u>Coracias garrulus</u>	1	1	-	-	Remains on old stick
Wryneck <u>Jynx torquilla</u>	1	1	-	-	Tail on stick
Calandra Lark <u>Melanocorypha calandra</u>	2	2	-	-	In petshop, Larnaca
Swallow <u>Hirundo rustica</u>	10	-	10	7	
Tree Pipit <u>Anthus trivialis</u>	1	1	-	-	
White Wagtail <u>Motacilla alba</u>	1	1	-	-	
Red-backed Shrike <u>Lanius collurio</u>	2	2	-	-	
Masked Shrike <u>L. nubicus</u>	1	1	-	-	
Garden Warbler <u>Sylvia borin</u>	1	-	1	1	
Blackcap <u>S. atricapilla</u>	722(1)	691	31	25	
Lesser Whitethroat <u>S. curruca</u>	6(3)	5	1	4	
Rüppels Warbler <u>S. ruppellii</u>	1(1)	1	-	1	
Willow Warbler <u>Phylloscopus trochilus</u>	7	5	2	2	
Chiffchaff <u>P. collybita</u>	10(3)	8	2	6	
Spotted Flycatcher <u>Muscicapa striata</u>	1	-	1	1	
Stonechat <u>Saxicola torquata</u>	4	3	1	1	
Redstart <u>Phoenicurus phoenicurus</u>	7(1)	4	3	2	
Robin <u>Erithacus rubecula</u>	21	9	12	8	
Nightingale <u>Luscinia megarhynchos</u>	3(3)	3	-	3	
Blackbird <u>Turdus merula</u>	2	2	-	-	
Song Thrush <u>T. philomelos</u>	2	2	-	-	
House Sparrow <u>Passer domesticus</u>	2	2	-	2	
Chaffinch <u>Fringilla coelebs</u>	2	-	2	1	
Serín <u>Serinus serinus</u>	1	-	1	-	
Linnet <u>Carduelis cannabina</u>	1	-	1	1	
Key:					
A = total number					
B = in sticks					
C = in mistnets					
D = number released					

Table 5: Birds found on limesticks or in mistnets during investigations in 1986. Numbers in brackets refer to birds found in spring.

The following 28 species from the Cyprus catch-list are considered to be vulnerable species in Europe (according to ICBP's European Continental Section):

Little Bittern
Squacco Heron
Pallid Harrier
Lesser Kestrel
Merlin
Spotted Crake
Little Crake
Stone Curlew
Short-eared Owl
Nightjar
Kingfisher
Blue-cheeked Bee-eater
Roller
Calandra Lark

Short-toed Lark
Woodlark
Tawny Pipit
Olive-tree Warbler
Rüppels Warbler
Barred Warbler
Red-breasted Flycatcher
Semi-collared Flycatcher
Collared Flycatcher
Red-backed Shrike
Lesser Grey Shrike
Trumpeter Finch
Ortolan Bunting
Cretzschmar's Bunting

Another nine species from the Cyprus catch-list appear on the ICBP-ECS list of Species with limited global range (breeding or wintering) with important populations in Europe:

Cyprus Pied Wheatear
Ring Ouzel
Spectacled Warbler
Subalpine Warbler
Sardinian Warbler

Cyprus Warbler
Bonelli's Warbler
Masked Shrike
Serin

Finally, three species in the Cyprus catch-list also appear on the ICBP-ECS list of Additional vulnerable migrants:

Sand Martin
Whinchat
Savi's Warbler

ESTIMATED NUMBERS OF BIRDS CAUGHT ANNUALLY IN CYPRUS

After his detailed investigation in 1968, Hubbard estimated that 'several' million birds were killed annually in Cyprus solely by liming (in Flint and Stewart 1983). For the Paralimni region alone Hubbard gave an annual total of at least a quarter of a million limed birds. In 1980, COS 1970 gave an estimated number of 25 million birds killed annually by liming and netting in the whole of Cyprus.

In this report the estimated number of birds killed annually by liming and netting comprises two components: an estimation for the Paralimni region and one for the rest of Cyprus.

Paralimni. In November 1986 the author was informed by limers that 20 October had been a very good day for catching birds since huge numbers of migrants occurred and one limer had caught 170 dozen (=2040) birds on that single day. Another limer later confirmed this information and said that on that day birds were 'numerous and everywhere' and that catchers, instead of ceasing work as usual at around 8 a.m., continued collecting birds till the afternoon. This information seems reliable: it is a well

known phenomenon that bad weather conditions can cause a delay in migration which leads to enormous concentrations of birds in certain places.

More than 2000 birds on one day may be exceptional, but every limer probably has one or a few 'good' days every year, on which hundreds of birds are caught. Limers are reluctant to show their catch to strangers. However, a limer once showed eight Blackcaps to the author which were caught in one morning and remarked that this was a very meagre yield. Another limer in the Paralimni region once displayed 24 birds which he considered a low number for one morning's catching. Catches vary widely from place to place depending on locality (coast, inland), and habitat (orchard, shrub). It was estimated that the daily catch per limer was 55-70 birds, which includes days with low catches in second-rate liming places and catches of hundreds of birds on good migration days in first-rate liming spots. The total number of catching days per season was rated at 50 per limer (people will go out for at least 35 consecutive days, others for 70 days or longer). If the total number of liming places in the region was 270-300, then a minimum of three quarters of a million and a maximum of over 1 million birds per year are caught on limesticks in the Paralimni region. No estimate for birds caught in spring is included in these figures as it is not fully clear to what extent catching is then practised.

Rest of Cyprus. In all, apart from Paralimni, some 100 instances of catching were detected in autumn 1986. About half of the cases concerned mistnets, the other half limesticks. Taking into account unsurveyed areas known to be suitable for trapping as well as those actually checked, an (possibly optimistic) assessment is that this represented 5% of the total amount of catching throughout the rest of Cyprus in 1986, which would imply a total of 2000 instances of catching. Annual catches are much lower than in the Paralimni region: it was estimated that every limer caught 150-400 birds annually, every netter 300-800 birds. This would give an additional 450,000-1,200,000 birds, bringing the total number of birds trapped annually in the Republic of Cyprus in the Government controlled part to between 1.2 and 2.2 million. Note that this number does not include an estimate for the 'occupied' part of Cyprus, of which no accurate data is available. However, it is believed that the trapping of song birds in the 'northern' part is practised on a relatively small scale.

TRADE

Limers, especially in Paralimni, sell large parts of their catches to shops and restaurants, earning about C£0.50 per bird. Ambelopoulia are then sold pickled in jars typically for C£10 a dozen, and they are also served grilled in restaurants for C£10 a dozen. All the jars with ambelopoulia found in shops in Nicosia were said to have been bought from Paralimni-based limers. In a hotel in Kakopetria, frozen raw birds were sold to customers for C£0.50 each. No figures were available but in view of the large quantities of birds involved and the usually high price per bird, annual turnover of ambelopoulia must amount to many hundreds of thousands of Cyprus Pounds. Some commerce also occurs in liming and netting equipment. Sticks without lime fetch C£0.50 per two dozen while two dozen limesticks are sold for C£15. The baskets to carry the limesticks are sold for C£3. Mistnets were on display in one shop for C£10. Export of ambelopoulia which is said to have been very common in the past, is now supposed to be virtually non-existent (Woldhek 1980).

In December 1984, the Council of Ministers promised to start enforcing Law 39/74 concerning the prohibition of the use of nets and limesticks for the capture of wild birds (this Council of Ministers Decision no. 25.261 of 13 December 1984 is presented in full under 'wildlife law and regulations'). The author could not obtain any comprehensive dossiers about police activities or prosecutions of poachers, but according to many people, the authorities are usually lax in applying the relevant laws. The Friends of the Earth Cyprus magazine 'Earthlines' issue 11 (1983) describes how in 1982 FoE tried to fight the total apathy and even blank refusal of the Larnaca police to enforce the laws. Even after FoE had identified the areas worst affected by mistnets and limesticks, the police refused to take action. In issue 14 (1985), referring to the Council of Ministers' Decision no. 25.261, FoE states: "Actually applying the law will be the task of the police, but given their past record, their willingness to carry out these obligations must remain uncertain".

During the 1986 investigations it was clear that the authorities often did take pains to enforce the law concerning mistnets; as demonstrated in this report, the use of mistnets had greatly declined. During investigations in 1986, the police proved willing to take action: a constable at the Kalavastos Police Station once showed two mistnets that had just been confiscated, and the Kalavastos police also acted (on request) against an instance of netting nearby. However, requests to the Kalavastos Police and the Chief of Police in Nicosia to undertake action in the Psematismenos/Maroni area so as to deter netters there, did not result in any action. Furthermore two large mistnets were found at a distance less than 100 metres from the Kalavastos Police Station.

Regarding the use of limesticks, the police were not willing to act at all. Not a single case is known of the police prosecuting a limer or ambelopoulia-seller, and when a constable at the Ayia Napa Police Station was questioned on liming in the nearby Paralimni region, he stated: "liming is illegal, and yet not illegal, since the local people make their own laws." A constable at the Paralimni Police Station regarded the birds caught in Cyprus only as the 'leftovers of all the birds caught in Turkey and Israel'. Police were on duty at the ambelopoulia festival in Ayios Theodoros on October 11th. Many policemen are not aware of the fact that liming is illegal.

The author was informed that, when the police started prosecuting netters in 1985, local people strongly objected to this but that they were subsequently assured by a very high government functionary that catching would be condoned provided that this was achieved by using limesticks and these were used off the main roads, so they would not be visible to strangers passing by. The authenticity of this utterance was confirmed by another high government employee who does not want to be quoted. The quotation clearly demonstrates the present attitude of the Cyprus government concerning the catching of migratory birds with limesticks. Thus the complete lack of action by the police is not surprising.

CONCLUSIONS

Two main conclusions can be deduced from the investigations carried out in 1986. Firstly, the use of mistnets has greatly declined compared with previous years. This is undoubtedly due to rigorous measures adopted by the police (and notably its Anti-poaching Unit) in 1985. However, a substantial number of mistnets was still in use in 1986 and this shows that much has to be done before netting is totally eliminated. It should

be emphasised that the controls on the import, sale and use of mistnets must remain rigorous as it is likely that the slightest slackening will lead to a return to the pre-1985 situation. Secondly, liming was practised openly on a large scale, especially in the Paralimni region. No effort was made by the authorities to deter or discourage the limers; in fact the reverse. Up to 2.2 million migratory birds were killed in the Republic of Cyprus in 1986 by illegal methods, and effective action programmes should be developed to press the Cyprus government to start enforcing its wildlife law in respect of limesticks.

In spring 1986, hardly any bird catching was practised. It is not certain whether this is due to a structural change in catching practices by limers, or whether it was only a temporary improvement caused by a lack of birds. It is advisable to have the extent of bird catching monitored every catching season by local or international observers, thus making it possible for authorities and conservationists to determine policies in respect of illegal bird catching.