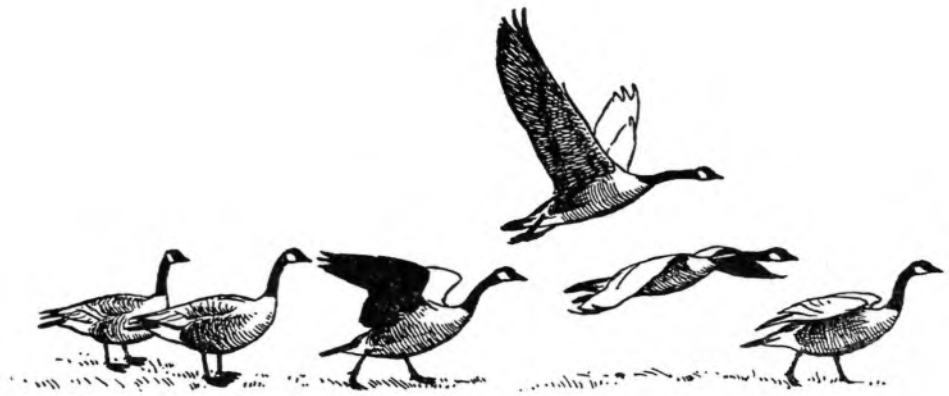

The status of the Canada Goose in Britain 1967-69

M. A. OGILVIE

Introduction

The Canada Goose *Branta canadensis* was originally introduced into this country from North America in the seventeenth century. Successive introductions have taken place since, the birds being released mostly on private waters both for their sporting value and as ornamental waterfowl. Little is known of the early history of the species in Britain, nor is it the intention of this paper to explore the matter. Potentially as interesting, but equally obscure, are details of the origin of the introduced birds. It is generally accepted that the British population is identical with the nominate race *B. c. canadensis* which inhabits the eastern parts of North America (Delacour 1954), and certainly this population would have been the most accessible to would-be exporters. It has recently been suggested (Kear 1966) that some of the British birds share characteristics with the Giant Canada Goose *B. c. maxima* as described by Hanson (1965), notably large size, a tendency for the white cheek patch to have a backward pointing hook at the top, and tameness, but this has not been fully investigated.

Although there is no information on actual numbers brought to Britain, it is reasonable to suppose that they would have totalled only a few hundreds even over a long period. It was not until 1953 that any attempt was made to count the British population. In that year a census was organised through the British Trust for Ornithology and the results published in considerable detail (Blurton Jones 1956). The total for July 1953 was found to lie between the limits of 2,200 and 4,000 birds. Blurton Jones noted that the geese were distributed in discrete, localised sub-populations, each with a rather restricted range, and little or no movement between them.

It was at about this time that the conflict between the Canada Geese and agricultural interests began to become more obvious. A resident flock of geese can do much apparent and a certain amount of real damage to crops, and it is therefore not surprising that farmers should have regarded this grazing species as a competitor with their stock and a reducer of grain yields. Some landowners had long been controlling numbers on their estates through removal or pricking of eggs. The 1954 Protection of Birds Act made this an offence, though it is doubtful whether this had much effect. However, other means of control were sought.

One method which rapidly gained favour was the reduction of flock size by the bodily removal of birds to other waters. Canada Geese are comparatively easy to catch in quite large numbers. When flightless during the annual summer moult they can be herded off the water and into a corral of netting. During the years 1953-57 the Wildfowl Trust undertook a number of round-ups at waters where flocks had become too large. There was little difficulty at first in finding places to release the surplus birds. Landowners with lakes but no Canada Geese were often willing to take them, and a number of wildfowling clubs also took birds in the hopes of establishing flocks which would provide sport. The Wildfowlers' Association of Great Britain and Ireland largely took over the catching and disposal of surplus Canada Geese

in the late 1950s. The full details of the movements and numbers involved are not the concern of this paper, and in any case it is more than doubtful whether complete records exist. The Wildfowl Trust moved at least 700 birds over five years, and the Wildfowlers' Association probably about the same number.

Nearly all the transportations resulted in the successful establishment of a new breeding flock, though some birds wandered, and a small proportion managed to return home, sometimes from distances of over a hundred miles. Dealing with sedentary birds a fairly high success rate was to be expected. Hine and Schoenfeld (1968) record that recent attempts to extend the winter range of migratory stocks of Canada Geese in the U.S.A. by transporting birds have nearly all been failures, despite the moving of about 20,000 geese. The ability shown by some British geese to home was rather surprising as the species was not known to move far under normal circumstances. To digress, this sedentariness might also be regarded as strange, in view of the long seasonal migrations between breeding and wintering areas undertaken by most populations of the species in North America. This could be a further prop for the suggestion that the original stock was drawn from the virtually non-migratory Giant Canada Goose population. History does not record whether any of the early introductions to Britain failed because the birds set off on migration. However, even if the original stock was migratory, in a species such as the Canada Goose, which has strong family bonds and the adult birds literally lead their young on migration, it would not take many generations for a sedentary tradition to be established. This process would be hastened by food supplies and climate remaining adequate throughout the year. The recent development of a moult migration in one sub-population in Britain, also a normal habit of some wild stocks in North America, is mentioned later. In general newly established flocks, where they were geographically isolated from other Canada Geese, have tended to form further discrete sub-populations.

Blurton Jones mentioned that there was plenty of apparently suitable Canada Goose habitat in the country not being utilised by the birds, and he suggested that the rather circumscribed movements of each sub-population would act against their discovering new waters, even though the latter might be quite close to their normal range. Therefore it follows that the programme of transporting surplus birds to new waters was almost bound to lead to an increase in population. This in fact took place along three complementary lines. Firstly there was the movement of birds to new waters where they were encouraged to settle down and breed. Secondly there was an increased amount of wandering, by the transported birds, which gave rise to a number of spontaneous colonisations. And thirdly the colonies whence birds had been removed recovered quite quickly to their former strength, unless further transportations were carried out.

The next stage in the recent history of the Canada Goose in Britain might well have been foreseen. The point was reached when there were no more suitable waters, or at any rate not with willing landowners, on which to release surplus birds. So, despite the fact that there were, and still are, birds for disposal in quite large numbers, transportation of them virtually stopped in the early 1960s. The problems that this is causing and some possible palliatives will be discussed later.

With all the moving of birds round the country, reducing some populations and starting others, the census details of 1953 rapidly became out of date. However, it was not until 1967 that any attempt was made on a national scale to census the geese again, though one or two individual studies were made on some sub-populations. In July 1967 a partial census was organised by the writer, and this was followed by a much fuller one in July 1968. The results are set out below.

Numbers of Canada Geese in Britain, July 1967 and July 1968

In July 1967 a complete count was made of the Canada Geese inhabiting the North and West Ridings of Yorkshire as part of a study being carried out there. These birds were known from ringing to form a discrete sub-population. The count was made early in the month and the total of 1,100 was obviously a substantial fraction of that for the whole of Britain. It was therefore decided to extend the cover, and wildfowl counters and bird watchers who regularly visited major Canada Goose sites were asked to try and make a count of their local water before the end of the flightless period, which rarely extends beyond the end of July. Despite the short notice, the response was excellent, and gave a total count of 5,269. This was recognised as being only a partial census and a more complete one was held in July 1968, giving a total of 7,906.

Gaps still existed, even in the 1968 census, particularly in areas where the geese are very scattered during the breeding season. In such cases it was often found that winter counts gave a more complete picture, when the geese were gathered in flocks. The advantage of July censuses was the relative immobility of the geese leading to a minimum risk of flocks being counted twice, which is not the case in winter. Nonetheless it was found possible to use winter information to supplement the summer censuses, provided the boundaries of the various discrete sub-populations could be delineated. An additional factor is that the July count will be close to the maximum that the population will reach, just after the breeding season, whereas by January shooting and natural losses will have led to some reduction in numbers.

The results of the censuses are given in Table I by sub-populations. Geographical details of the latter are given below in further detail. Also shown in the Table are the numbers of geese counted in each of the three mid-January International Wildfowl Censuses held in 1967 to 1969. These involved a greater cover of waters in the country than do the normal monthly national wildfowl counts. The cover, and thus the total count, was much reduced in January 1968 because of restrictions on access imposed during the foot and mouth epidemic. The last column gives an estimated total for each sub-population based on the counts and censuses. This, where possible, is the result

Table I. Numbers of Canada Geese in Britain, 1953 and 1967-69.

		Counts and censuses					*Estimated*
Sub-population area	*Total 1953*	*Jan. 1967*	*July 1967*	*Jan. 1968*	*July 1968*	*Jan. 1969*	*Total 1967-69*
South Devon	—	X	223	90+	208	38+	220
South Dorset	—	192	X	100+	140+	162	180
South Hampshire	—	43+	X	X	83	46+	80
Sussex and south Surrey	23-50	295	X	279	73+	42+	290
South Kent	—	X	X	12+	27	X	30
North and central Kent	—	X	X	147+	337	280+	340
London	—	66	X	126	48	X	130
Berkshire, Hampshire, etc.	133-163	566+	346+	570+	276+	169+	570
Wiltshire, north Berkshire	30-62	19+	X	17+	X	42+	50
Gloucestershire	—	80	X	90	X	110	100
Monmouthshire	—	20	X	20	X	20	20
Pembrokeshire	—	32	X	32	37	X	40
Warwickshire, east Staffs	84-104	329	376	18+	378	550	380
Derbyshire	376-437	766	893	X	703+	832	890
West Staffs, east Salop	—	585	75+	X	480	494	480
Central and west Salop	—	148+	X	71+	289	117+	290
North Salop, south Cheshire	506-598	768+	416+	186+	490+	20+	490
Montgomeryshire	68-84	150+	X	X	X	400	400
North Cheshire	165-219	103+	144+	X	550	X	550
West Cheshire		87	X	100+	69	113+	110
Anglesey	—	200	X	X	X	71+	200
Essex	—	34+	50+	55+	141	96+	140
Suffolk	—	42	X	31	12	32	30
North Suffolk, south Norfolk	157-225	X	X	X	X	296	300
North Norfolk	350-500	372	780+	114+	747	320+	760
Norfolk Broads		30+	22+	X	121	X	120
Cambridgeshire	—	35	X	X	X	X	40
Northants, Leicestershire	181-229	143	125+	130+	150	178	180
Lincolnshire	—	280	330	340	355	211+	340
Nottinghamshire	173-200	263	163+	87+	455	194+	460
South Yorkshire — Hornsea	—	24	36	38	0	36	40
South Yorkshire	107-127	87+	X	101+	131	202	200
Central Yorkshire	330-398	X	1290	X	1324	X	1310
Lancashire	115-156	40+	X	X	174	X	170
North Lancs, Westmorland	—	10	X	81	X	136	140
Northumberland	—	19	X	27	X	X	20
Scotland	119-194	X	X	X	62+	X	100
N. Ireland	47-120	65	X	75	46	2+	70
Totals	2954-3866	5892	5267	2937	7906	5709	10260

— = sub-population did not exist in 1953
X = no count made
00+ = known to be incomplete count

of a complete simultaneous count of the sub-population, or the mean of more than one, though means are only used where these are of either summer or winter counts, but not a mixture of both. Some slight marrying of figures has been necessary in areas where it is apparent that complete counts have not been made, but this only amounts to 90 birds in three sub-populations. The totals for 1953, extracted from Blurton Jones (1956), are also given for comparison. Most of the sub-divisions used by Blurton Jones hold good today, though of course several new populations have come into being since.

Totalling the sub-population estimates in Table I, and making allowance for the small numbers of birds undoubtedly missed in some areas, it is found that Britain in the period 1967-69 had a population of approximately 10,500 Canada Geese. This represents the late summer, post-breeding total, i.e. the maximum. It is believed that the figure may be accurate to within 5%. Losses during the autumn and winter will reduce it by perhaps 15-20% in this lightly shot species. There seems little doubt that there has been a three-fold increase since 1953.

Distribution of Canada Geese in Britain

The various sub-populations are now dealt with, the areas being given by county, or part county. Most of them accord with the divisions used by Blurton Jones, though there are several new ones, and some others have extended in area. The 1953 and 1967-69 totals are given for each, extracted from Table I.

South Devon: River Exe valley and estuary.
1953: 0; 1967-69: 220.

The headquarters of this group is Shobrooke Park, near Exeter. Some other smaller waters in the neighbourhood are also used. In winter many of the birds are found on the Exe Estuary.

South Dorset: Poole Harbour and Crichel Lake.
1953: 0; 1967-69: 180.

Many geese breed on Brownsea Island, but also scattered round the harbour. The most complete counts are winter ones. Up to 15 birds are regularly found on Crichel Lake, but are almost certainly linked with the Poole Harbour flock.

South Hampshire: Needs Oar Point.
1953: 0; 1967-69: 80.

Sussex and south Surrey: Pulborough floods, Knapp Castle, Warnham Mill, and others.
1953: 23-50; 1967-69: 290.

A scattered population, which may consist of several discrete flocks, but from winter evidence probably not. A single flock of 240 on the Pulborough floods in January 1968 was far larger than the sum of either of the summer counts in the area.

South Kent: Dungeness.
1953: 0; 1967-69: 30.

North and central Kent: gravel pits and lakes near Sevenoaks, Maidstone and Tunbridge Wells.
1953: 0; 1967-69: 340.

These birds were put down in the area by wildfowlers in the 1950s and have flourished.

London: Hyde Park, some use of River Thames near Kew.
1953: 0; 1967-69: 130.

Breeds in Hyde Park, possibly elsewhere.

South Berkshire, north Hampshire, west Surrey, south Buckinghamshire: lakes and gravel pits in Aldershot-Reading-Newbury triangle, Chertsey lake, waters in Windsor Great Park, and Wraysbury gravel pits.
1953: 133-163; 1967-69: 570.

A large and complex group inhabiting at least eighteen waters, though not breeding on all of them. The actual total is probably higher than that given, which is the largest simultaneous count available. Many of the waters used are gravel pits which have greatly increased in the area in the last twenty years.

Wiltshire and north Berkshire: Stourhead, Wilton Water, Broad Water, Buscot Lake.
1953: 30-62; 1967-69: 50.

Small numbers occur at all four places and are probably separate flocks.

Gloucestershire: Frampton gravel pits.
1953: 0; 1967-69: 100.

This population was introduced in 1953. Considerable control has been exercised in recent years, by the removal to other areas of the majority of the young. Natural control in the form of an endemic renal disease has also been a limiting factor.

Monmouthshire: Newport area.
1953: 0; 1967-69: 20.

Pembrokeshire: Fowborough.
1953: 0; 1967-69: 40.

The west Midlands:
1953: 961-1,139; 1967-69: 2,530.

The counties of Warwickshire, Staffordshire, south Derbyshire, Shropshire and south Cheshire hold a large, complex population of geese. Blurton Jones tentatively split it into four, though acknowledging that they might well be linked. Since then many waters in the areas

between have become colonised and it is no longer possible to draw definite boundary lines to separate them. Extensive ringing in the area in the last three years is also indicating some occasional links between possible groups (Dr. C. D. T. Minton, pers. com.). Movements to other areas, notably Yorkshire, were recorded recently but only a handful of birds have been involved so far compared with the many hundreds ringed. Fortunately the whole area has been quite thoroughly censused in the last two years and so the population total can be given with some confidence. Five sub-divisions within the area are tentatively detailed below but subsequent information may prove that they are not fully discrete.

a) *North Worcestershire, Warwickshire, and south and east Staffordshire:* many waters and park lakes around Birmingham, gravel pits near Tamworth and Burton.

1953: 84-104; 1967-69: 380.

Ringing has shown considerable movement between various sites around Burton and Tamworth and to a lesser extent south Birmingham. Ringing also indicates a link with flocks to the north-west of the city, dealt with under (c).

b) *Derbyshire:* park lakes at Kedleston, Osmaston, Allestree, Locko Hall, etc.; some make use of River Trent floods in winter.

1953: 376-437; 1967-69: 890.

The main water in the area is Kedleston Hall where about 800 birds live. There is a probable link with the previous sub-group (a), as flocks from both tend to resort to floods in the Trent valley in winter. However, the Kedleston flock remains fairly constant in numbers indicating rather little interchange.

c) *West Staffordshire, east Shropshire:* various park lakes and reservoirs.

1953: 0; 1967-69: 480.

Ringing indicates a connection with sub-group (a).

d) *Central and west Shropshire:* numerous small waters round Shrewsbury and Oswestry.

1953: 0; 1967-69: 290.

This probably doesn't qualify as a sub-group but its exact relationships are obscure. There are bigger populations on larger waters to the east (c) and to the north (e).

e) *North Shropshire, south Cheshire:* Ellesmere group of waters, plus Combermere, Barmere, Shavington, and many smaller waters.

1953: 506-598; 1967-69: 490.

This area was split into two by Blurton Jones, but this no longer seems justified. The number of different waters in the whole area makes complete counts difficult to achieve and it is probable that the figure used is an underestimate. There was a count from most of the waters of 768 in January 1967, but this could have included birds which had moved from some of the waters covered in (d).

Montgomeryshire: Welshpool area.

1953: 68-84; 1967-69: 400.

Maximum numbers are present in winter, in the Severn valley near Welshpool. The full summer distribution is not known, though obviously scattered for the most part. There could be links with Shropshire birds.

North Cheshire: Rostherne, Tabley, Tatton and other meres.

1953: 165-219; 1967-69: 550.

Another difficult group to census as the geese are usually spread over several waters. The figure given is the best that could be obtained during the period under review.

West Cheshire: Aldford, Eaton Hall, River Dee marshes.

1953: 80 (part of south Cheshire group); 1967-69: 110.

Believed to be a discrete group, breeding on waters in the area, and found on floods in winter.

Anglesey: various waters on the island.

1953: 0; 1967-69: 200.

Essex: Hanningfield Reservoir, and on farm reservoirs and waters in the north and north-west of the county.

1953: 0; 1967-69: 140.

There may be two separate flocks here but there is some evidence of mixing in the winter.

Suffolk: Minsmere.

1953: 0; 1967-69: 30.

North Suffolk, south Norfolk: Breckland waters.

1953: 157-225; 1967-69: 300.

There is some evidence that there is a connection with the population centred round Holkham, north Norfolk.

North Norfolk: Holkham Park and nearby waters.

1953: 350-500; 1967-69: 760.

This population was much larger a few years ago, with counts of 1,700-2,000 in 1965. It has clearly undergone a drastic reduction.

Norfolk: Broads.

1953: 40 (part of Holkham flock); 1967-69: 120.

Connection with Holkham flock more doubtful.

Cambridgeshire: various gravel pits and the Ouse Washes.

1953: 0; 1967-69: 40.

Northamptonshire and Leicestershire: Blatherwycke and Deene Lakes, Stapleford Park and various reservoirs and gravel pits.

1953: 181-229; 1967-69: 180.

Some of these may be discrete groups, but there is insufficient evidence to be sure.

Lincolnshire: Grimsthorpe Lake.

1953: 0; 1967-69: 340.

Possibly connected with the previous area, but fairly constant figures indicate a separate flock. Recent ringing here may soon confirm this.

Nottinghamshire: the Dukeries.

1953: 173-200; 1967-69: 460.

Main waters are Clumber, Thoresby, Worksop and Welbeck. Their general proximity suggests a single sub-population.

South-east Yorkshire: Hornsea Mere.

1953: 0; 1967-69: 40.

South Yorkshire: various lakes and reservoirs around Barnsley.

1953: 107-207; 1967-69: 200.

Ringing has shown a slight connection with the very large population north of Leeds.

Central Yorkshire: numerous park lakes and reservoirs from Leeds north to Masham.

1953: 330-398; 1967-69: 1,310.

A study is in progress of this sub-population which has led to a full cover of waters and accurate counts. It is from this area that the moult migration takes place to the Beauly Firth. The origin of the moulters was not discovered until 1963 (Dennis 1964), though the migration had been going on for about fifteen years before then. At first involving only 20 birds, there were about 250 in 1968. Further work is in progress on discovering the age structure of the moulters and other aspects of the sub-population.

Lancashire: park lakes in and around Liverpool.

1953: 115-156; 1967-69: 170.

North Lancashire and south Westmorland: Lune valley.

1953: 0; 1967-69: 140.

This isolated group winters in the Lune Valley south of Kirkby Lonsdale, breeding on reservoirs between there and Sedbergh.

Northumberland: Colt Crag reservoir and nearby waters.

1953: 0; 1967-69: 20.

Scotland: various.

1953: 119-194; 1967-69: 100.

There appear to be only four places in Scotland where Canada Geese can regularly be found. About 50 birds live at Kinmount, Dumfriesshire; there is a small population on Colonsay of 30-50 birds; a few pairs in Renfrewshire; and a very few pairs breed in Perthshire.

Northern Ireland: Strangford Lough.

1953: 47-120; 1967-69: 70.

There is a single population centred on Strangford Lough, Co. Down. Apart from that only stragglers are recorded.

Conclusions

It seems altogether unlikely that the Canada Goose will continue to increase in numbers as fast as it has done in the last fifteen years. The artificial spreading of birds to new waters has virtually stopped. Removing birds as a control measure is only successful if it is repeated at intervals, and in relieving pressure at some points, it creates new problems elsewhere. Other methods of control, particularly egg removal or pricking, continue, and those sub-populations based on private waters will probably be held at a reasonable level by the landowners concerned. However, increasing numbers of geese are now breeding on gravel pits and reservoirs. Unless steps are taken these groups of birds will continue to increase. A further factor in their favour is the constant increase in these types of wetland habitat.

Control of Canada Goose numbers in this country is recognised by all relevant bodies as being necessary. There seems no reason why the interests concerned should not come to terms with the Canada Goose though methods of maintaining a satisfactory balance are mostly crude, both in technique and in results. The most acceptable form of control would be winter shooting which combined a check on numbers with a strong element of sport. Unfortunately one of the biggest disappointments has been to landowners and wildfowlers trying to turn the species into a provider of sport. Time after time this has been the intention behind the starting of a new colony of birds, but with a very few exceptions it has not succeeded. The main difficulty appears to be to get the geese to become at all wild. They often do not adopt any regular daily flighting patterns. Frequently they can walk from the roosting water on to a feeding field, and even when they do fly it is usually at tree-top height or lower, thus not presenting a sporting shot. Certainly they can be and have been shot under these conditions as a control measure but not for sport.

Various control methods were reviewed by Matthews (1965) but as this report was

for restricted circulation the main conclusions will be repeated here. Egg destruction, which is quite commonplace, can be effective but unless it is correctly timed the geese will lay a second clutch. In any case it has a rather slow effect on numbers, working at the wrong end of the 'population pyramid', and gives no immediate relief from damage. As already mentioned mass winter shoots have been tried and these are undoubtedly successful in controlling both numbers and damage. However, the accusation of causing damage is more often laid against the geese during the spring, after the end of the shooting season. Out of season culling by shooting, or by killing of flightless birds, has, it is thought, been carried out on a number of occasions in this country. The legal position is not very clear. The 1954 Protection of Birds Act allows for the killing of birds in the close season in order to prevent serious damage to crops, but it is generally held that this only covers killing whilst the damage is actually being done, catching the birds *in flagrante delicto* as it were. There appear to be somewhat similar powers under the Agriculture Act of 1947 for action against birds causing damage. A further difficulty is the actual proof of damage. Detailed experiments have shown that what appears to be serious damage to, say, a field of growing cereals in early spring, is not necessarily reflected in lessened yields at harvest (Kear 1965), though this may not hold true for later heavy grazing.

There would appear to be sufficient latitude under the existing law for this sedentary species to be controlled by shooting if those concerned really tried. There is also little doubt that in most cases control measures already being undertaken would be more effective if related to actual numbers present rather than, as is often done, removing a set number of eggs or birds each year. However the flock size at which complaints start varies enormously from place to place. Whilst one farmer, used to having geese around, may only become aggrieved when the flock reaches 200, another may regard 20 as intolerable. The whole question is essentially a series of local problems requiring local solutions. Certainly it is unnecessary for this fine bird to be declared a pest species, by placing it on Schedule II under the 1954 Act, along with crows and the like. Finally it may be pointed out that if the Canada Goose causes problems in some parts of Britain this is just another example, among so many, of the dangers of introducing a species into an area outside its normal range.

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Summary

The Canada Goose *Branta canadensis*, introduced from North America in the seventeenth century, was first censused in 1953 when the population stood at 2,200-4,000 birds. It was found to be divided into several discrete sub-populations. Removing birds from localities where there were complaints of agricultural damage and releasing them on new waters was extensively carried out in the 1950s. This was ineffective as a control measure and led to a rapid rise in overall numbers. Censuses in July 1967 and 1968 revealed a population total of about 10,500 birds. The distribution in the country is reviewed in detail. Various control methods are discussed.

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