

NORTH AMERICAN BIRD BAND RECOVERIES FROM THE LESSER ANTILLES

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Abstract. We review records of 595 birds among 37 nonpasserine species banded in Canada and the United States and recovered in the Lesser Antilles. 305 (51%) are ducks, mainly Blue-winged Teal (*Anas discors*) (301 = 99%). Of the 469 birds banded as young of year, 431 (92%) were recovered within their first or second calendar years of life. 511 recoveries (86%) were shot. Seven new locality records are presented. *Accepted 9 June 1993.*

Key words: Band recoveries, Lesser Antilles, North American migrants.

INTRODUCTION

The distribution and status of North American migrants in the Lesser Antilles (Fig. 1) have been reported by Bond (1956, 1988) and brought up to date in greater detail by Evans (1990). Additionally, Arendt *et al.* (1992) provided an island by island assessment of landbird migrants throughout the West Indies, and Voous (1983) reported numerous locality records for the Dutch islands St. Martin, Saba, and St. Eustatius. However, band recoveries are infrequently mentioned in these reports, and no current, comprehensive treatment of band recovery data exist for the region. The present study analyzes 595 recoveries for 37 nonpasserine species in the Lesser Antilles with respect to recovery sites, origins (banding sites), age classes, seasonality, and factors contributing to mortality.

METHODS

All recovery records were obtained from files of the Bird Banding Laboratory (BBL), Laurel, Maryland; only birds banded in Canada and the United States were considered. Place names of recovery sites were determined by plotting the BBL coordinates for 10-minute blocks of latitude and longitude onto aeronautical charts (National Oceanic and Atmospheric Administration 1988, Defense Mapping Agency 1984) and confirmed by literature records whenever possible. Ques-

tionable locality records and at sea recoveries have been omitted. Distances between banding and recovery sites mentioned in selected cases were measured as straight lines in an atlas. "Young of the year" are birds known or presumed banded the year of hatching and may include various combinations of BBL categories immature, juvenile, and young incapable of sustained flight (BBL age codes 2, 3, and 4, respectively); "flightless young" refers to code 4 birds only. Scientific and English names and sequence of species follow the American Ornithologists' Union (1983).

SPECIES ACCOUNTS

Ardea herodias (Great Blue Heron). One banded in Maine as a young of the year in June 1941 was shot in Guadeloupe on an unspecified date in 1946.

Casmerodius albus (Great Egret). Five banded in New Jersey were recovered in Anguilla, Guadeloupe, Dominica, and St. Lucia (2), and two from Maryland and one from New York were recovered in Martinique. All were banded as young of the year in May and June and recovered in October and November of their hatching year; at least four were shot.

Egretta thula (Snowy Egret). Four banded in Virginia were recovered in Guadeloupe and Martinique (3), and two others banded in New York were recovered in Guadeloupe. All were banded as flightless young in May and June and shot the following September and October.

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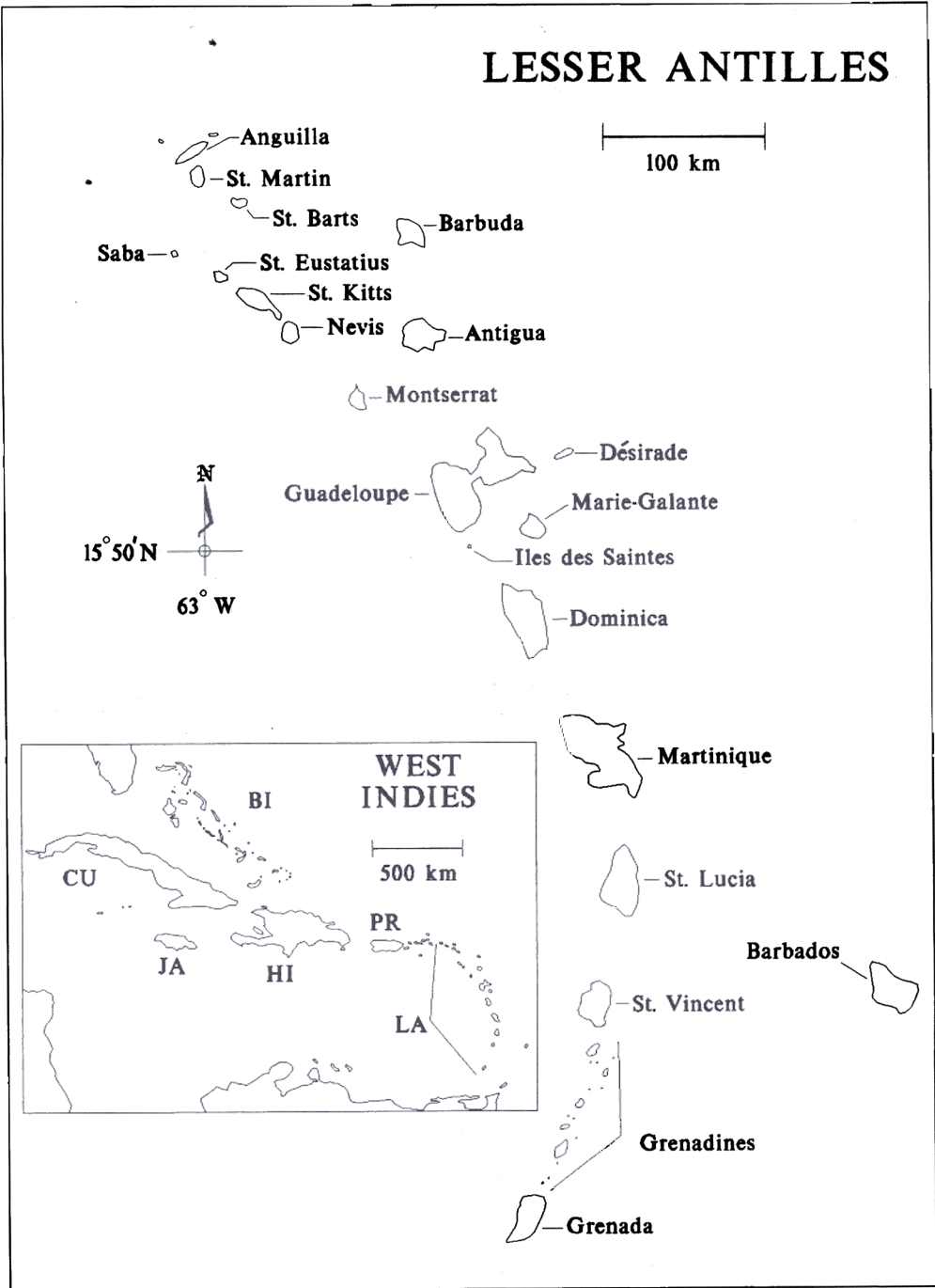


FIG 1. West Indies (inset), showing the Lesser Antilles. BI = Bahama Islands; CU = Cuba; HI = Hispaniola; JA = Jamaica; LA = Lesser Antilles; PR = Puerto Rico.

Egretta caerulea (Little Blue Heron). At least 13 of the 14 recoveries were banded as flightless young in May and June, and from New Jersey (3), Maryland (5), Virginia (4), and North Carolina (1). The other was banded as a juvenile in Mississippi. Two of the birds were found dead and all the others were shot. Nine of the recoveries were in September and October and within 5 months of banding, and the longest time span was 10 years for one banded in New Jersey in June 1967 and found dead in Martinique in March 1977.

Egretta tricolor (Tricolored Heron). Five banded in Virginia were shot in Guadeloupe (2), Martinique, St. Lucia, and Barbados, and another from New Jersey was shot in Guadeloupe. All were banded as flightless young during May-July, and all but one were recovered within 6 months in October and November, the one exception being banded June 1969 and recovered on St. Lucia in its fourth calendar year in November 1972.

Nycticorax nycticorax (Black-crowned Night-Heron). One banded in Quebec as a flightless young in June 1975 was shot on St. Lucia in January 1976.

Aix sponsa (Wood Duck). A male banded in Quebec as a flightless young in July 1975 and shot on Saba in December 1975 is the only record for the Lesser Antilles, and was first reported by Titman & Seaman (1978).

Anas discors (Blue-winged Teal). The 301 recoveries represent 51% of the total for all species in the Lesser Antilles combined. They originate from eight provinces and 20 states, the greatest contributors being New Brunswick (55), Ontario (44), Nova Scotia (35), Prince Edward Island (25), and New York (22). Botero & Rusch (1988) reported *A. discors* as the most common species in their analysis of anatid recoveries in the West Indies.

The 297 with recovery dates specified as to month all are September-April with especially large numbers in September (52 = 18%), October (179 = 60%), and November (33 = 11%), which doubtless reflects hunting activity, as does the large number reported shot (281 = 95%); 174 (59%) were young birds recovered in their first fall (September-November). Among those migrating the farthest in the shortest time are seven banded in Canada (5) and the northern United

States (Massachusetts, and Maryland) and recovered in the Lesser Antilles 12–17 days later. The fastest time was by a female banded in Vermont as a young of the year on 13 September 1960 and shot on Guadeloupe on 19 September, averaging approximately 533 km/day.

Many pairs or groups banded at the same location on the same day have been recovered on the same or adjacent islands during the same season suggesting group adherence in migration and on the wintering grounds. Among them, two banded in Ohio on 8 September 1963 were shot on Guadeloupe on 5 and 7 November 1963 and three banded in Maine on 9–10 September 1969 were recovered on Barbados 3–4 November 1969.

Anas americana (American Wigeon). One from Minnesota and another from Nova Scotia were both shot on Martinique and another from New Brunswick was shot on St. Lucia, all in November.

Pandion haliaetus (Osprey). One banded in Maine as a flightless young in July 1972 was recovered on Martinique in October 1973.

Falco sparverius (American Kestrel). One banded as an adult in Virginia in September 1987 was recovered on Anguilla in January 1988.

Falco columbarius (Merlin). One banded in New Jersey as a young of the year in September 1973 was found dead on Guadeloupe in November 1973.

Falco peregrinus (Peregrine Falcon). One from New Brunswick, and another from New Jersey were shot on St. Martin, and one from Maryland was shot in Guadeloupe; all were banded as young of the year. Another banded in Wisconsin as an immature in September 1989 was shot on Barbados in November 1989. The shortest interval between banding and recovery was four months (July to November) for the New Brunswick bird and the longest was four years for the Maryland bird banded September 1979 and recovered November 1983. The male from New Jersey represents an unusual summer record for the West Indies having been banded in October 1989 and reported shot on Guadeloupe sometime the following June. *Falco peregrinus* overwinters throughout the Caribbean area (American Ornithologists' Union 1983, Bond

1988) and has been recorded breeding recently on Dominica (Evans 1990). The only other West Indian breeding record of which we are aware is an unconfirmed report of a nest being found in Cuba in 1975 (Wotzkow 1985).

Pluvialis squatarola (Black-bellied Plover). One banded in Maine on 22 October 1960 was shot on Martinique 36 days later, 27 November.

Pluvialis dominica (Lesser Golden-Plover). One banded in Illinois in October 1955 was shot on Guadeloupe in September 1958.

Charadrius semipalmatus (Semipalmated Plover). Three from Ontario, Massachusetts, and New Jersey were shot in Martinique. Two were of unknown age and recovered within 13 months after banding. The other (from Ontario) was banded as a young of the year on 3 August 1977 and recovered on 22 August 1977. Another banded in Ontario as an adult on 22 August 1976 was shot on Barbados on 24 September 1976.

Tringa flavipes (Lesser Yellowlegs). Five banded in Ontario, Northwest Territories (Mackenzie), Massachusetts, New Jersey, and Wisconsin were shot on Martinique, and one each from Ontario and Massachusetts was shot on Barbados. All were recovered during July–October.

Actitis macularia (Spotted Sandpiper). One banded in New York on 19 August 1933 and another in Ontario on 2 September 1989 were shot and found dead on Martinique on 13 September 1933, and 15 October 1989, respectively.

Arenaria interpres (Ruddy Turnstone). One from New Jersey and another from Virginia were recovered in Martinique in August and September, respectively.

Calidris cantus (Red Knot). One adult banded in Massachusetts on 26 July 1983 was shot on Barbados 22 days later, 17 August.

Calidris alba (Sanderling). One banded in Nova Scotia as a young of the year in August 1971 was shot on Barbados in October 1971.

Calidris pusilla (Semipalmated Sandpiper). The 54 recoveries originate from four provinces and four states — 48 (89%) from Canada (Ontario 33, Quebec 9, New Brunswick 5, Nova Scotia 1), and the six others from Massachusetts (3), North Dakota, Kansas, and Virginia. 48 (89%) of the

recoveries were in August (8), September (28), and October (12), and the others were in November (1), January (1), and April (4). Seven recovered on Guadeloupe, Martinique, St. Lucia, and Barbados 17 to 26 days after being banded in Canada (5), North Dakota, and Massachusetts had the shortest times between banding and recovery.

Although *C. pusilla* is widespread throughout the West Indies in winter (American Ornithologists' Union 1983, Bond 1988), banding returns suggest it is most numerous in the eastern Caribbean. Of the 56 recoveries for the West Indies current to fall 1992, 54 (96%) are from the Lesser Antilles (Antigua to Barbados).

Calidris minutilla (Least Sandpiper). Six from Quebec, one from Ontario and another from Maine were recovered on Barbados (6), Guadeloupe, and Martinique during August and September. The shortest time between banding and recovery was 24 days for a bird from Quebec banded as an adult on 24 August 1972 and shot on Barbados. At least seven of the eight were shot.

Calidris fuscicollis (White-rumped Sandpiper). Two adults banded in Quebec and Ontario were recovered in Martinique and Barbados in March and September, respectively.

Calidris melanotos (Pectoral Sandpiper). One banded in Ontario as a young of the year in August 1981 was shot in Martinique in 1982, another young bird banded in Ontario on 6 September 1976 was shot on Barbados on 18 October 1976, and one banded in Kansas as an adult in May 1973 was shot on Martinique in October 1975.

Calidris himantopus (Stilt Sandpiper). One adult banded in Kansas in July 1974 was shot on Barbados in August 1976.

Limnodromus griseus (Short-billed Dowitcher). Six banded in Quebec (4) and Massachusetts (2) in July and August were recovered on Guadeloupe (1), Martinique (2), and Barbados (3), at least five of them being shot. All the recoveries were August–October and within two months of banding, the shortest time being 25 days.

Gallinago gallinago (Common Snipe). Seven banded in Labrador (5) and Ontario (2) in August and September were shot in Guadeloupe

and Martinique during October and November, five of them within three months and the two others 14 months after banding.

Larus delawarensis (Ring-billed Gull). One found injured on Antigua in March 1960, another found dead on Guadeloupe in November 1958, and one shot on St. Lucia on 28 August 1971 were recovered 5–13 months after being banded as flightless young in Ontario in June. Whether the August recovery is an early arrival or a bird that had not returned to its breeding ground is unknown.

Sterna nilotica (Gull-billed Tern). One banded in South Carolina as a flightless young in July 1970 was shot on Guadeloupe three months later.

Sterna sandvicensis (Sandwich Tern). One banded in North Carolina as a flightless young in August 1981 was shot on Guadeloupe in 1982.

Sterna dougallii (Roseate Tern). Nine banded in Massachusetts (8) and New York as young of the year during June–August were recovered (six of them shot) during August–November on five different islands. Seven of them were in their year of hatching, one was in its 13th month and the other was in its fourth calendar year of life.

Sterna maxima (Royal Tern). Ten of the 11 banded as flightless young in Virginia (7) and North Carolina (4) in June and July were recovered within 19 months, and one banded in Virginia in June 1983 was recovered on Grenada eight years later in March 1991. Three were recovered on St. Martin (1) and St. Kitts (2) in May and the 7 others were recovered on St. Martin (1), St. Kitts (1), Nevis (1), and Guadeloupe (4) during September–March.

Sterna hirundo (Common Tern). Evans (1990) considered *S. hirundo* an uncommon migrant in the eastern Caribbean during August–October. The 114 recoveries represent 19% of the total for all species in the Lesser Antilles combined. They originate from three provinces (one each from Ontario, New Brunswick, and Nova Scotia) and five states, mainly from Massachusetts (80 = 70%) and New York (24 = 21%) with five from New Jersey and one each from Connecticut and Wisconsin. Recoveries were made during every month except February, May, and June; 90 (79%) of them were in September (50), and Oc-

tober (40). Of the 104 known to have been banded as young of the year, 99 (95%) were recovered during their first fall (August–November). The one banded as an immature in Wisconsin is the only West Indian recovery of a Common Tern from that state; however, Haymes & Blokpoel (1978) report that young from Great Lakes colonies occur “in relatively high numbers . . . on Caribbean islands”.

Sterna antillarum (Least Tern). One banded in Florida as a flightless young in June 1976 was shot on Guadeloupe in September 1976.

Sterna fuscata (Sooty Tern). Five of the six banded on the Dry Tortugas, Florida as flightless young in June and July were recovered within 11 months, and the other banded in June 1959 was shot on Guadeloupe six years later in May 1964.

Anous stolidus (Brown Noddy). One immature banded in Florida in June 1966 was caught by hand on St. Lucia in March during its sixth calendar year of life.

DISCUSSION

The 595 birds banded in Canada and the United States and recovered among 19 islands and island groups in the Lesser Antilles during 1926–1992 are all nonpasserines, and 15 of the 37 species occur as breeders as well as nonbreeding visitors, at least on some islands (Table 1). The recoveries are biased toward waterfowl and other potential game. Over half the encounters are Blue-winged Teal (301 = 51%). Two other duck species contribute only four additional recoveries. Other species groups contributing to recoveries are terns (144 = 24%), shorebirds, including sandpipers, plovers, and allies (100 = 17%), herons and egrets (36 = 6%), hawks (7 = 1%), and gulls (3 = 1%). The 95 shorebird encounters (mainly *Calidris* spp.) represent 81% of all shorebird recoveries in the West Indies. The Lesser Antilles, being the southeasternmost islands in the Caribbean, are the first landfall for large numbers of shorebirds migrating southward from eastern Canada and the United States to wintering grounds in the southern Caribbean and South America (McNeil & Burton 1976, Morrison 1984). The only landbirds are three species of hawks (*Falco sparverius*, *F. columbarius*, *F. peregrinus*), four if the predominately marine Osprey is

TABLE 1. Recoveries of North American migrants in the Lesser Antilles from records in BBL, USFWS

Species	Number recorded & locations ¹															
	Ag	SM	SB	Sb	Bu	SK	Nv	At	Gu	Do	Ma	SL	SV	Gr	Ba	
<i>Ardea herodias</i> *																
<i>Casmerodius albus</i> *											3	2				
<i>Egretta thula</i> *									3		3					
<i>Egretta caerulea</i> *									5		7					
<i>Egretta tricolor</i> *									3		1					
<i>Nycticorax nycticorax</i> *																
<i>Aix sponsa</i>																
<i>Anas discors</i>	8				12	5		16	72		73	23			86	
<i>Anas americana</i>											2	1				
<i>Pandion haliaetus</i>											1					
<i>Falco sparverius</i> *																
<i>Falco columbarius</i>																
<i>Falco peregrinus</i> *		2														
<i>Pluvialis squatarola</i>																
<i>Pluvialis dominica</i>																
<i>Charadrius semipalmatus</i>																
<i>Tringa flavipes</i>											5					
<i>Actitis macularia</i>											2					
<i>Arenaria interpres</i>											?					
<i>Calidris canutus</i>																
<i>Calidris alba</i>																
<i>Calidris pusilla</i>									18		10	3			22	
<i>Calidris minutilla</i>									1							
<i>Calidris fuscicollis</i>																
<i>Calidris melanotos</i>																
<i>Calidris himantopus</i>															1	
<i>Limnodromus griseus</i>									1		2				3	
<i>Gallinago gallinago</i>									5		?					
<i>Larus delawarensis</i>									1							
<i>Sterna nilotica</i> *									1							
<i>Sterna maxima</i> *		2				3			4							
<i>Sterna sandvicensis</i> *									1							
<i>Sterna dougallii</i> *									1	1	4					
<i>Sterna hirundo</i>									12	5	64	8		17		
<i>Sterna antillarum</i> *									1							
<i>Sterna fuscata</i> *											2					
<i>Anous stolidus</i> *																

¹ Key: Ag = Anguilla; At = Antigua; Ba = Barbados; Bu = Barbuda; Do = Dominica; Gr = Grenada and the Grenadines; Gu = Guadeloupe, Désirade, Marie-Galante, and Iles des Saintes; Ma = Martinique; Nv = Nevis; Sb = Saba; SB = St. Barts; SK = St. Kitts; SL = St. Lucia; SM = St. Martin; SV = St. Vincent. * Recorded breeding on one or more of the Lesser Antilles.

included. The absence of passerines and paucity of landbirds as a group may be due to both the small size of the Lesser Antilles and their distance from source populations in continental North America (Terborgh & Faaborg 1980) as well as to a game bird bias in sampling.

The majority of recoveries (522 = 88%) were during August–November — mainly October (258 = 49%). Of the 469 birds banded as young of the year, 431 (92%) were recovered within their first or second calendar years of life indicating a high mortality among the young (Table 2). That 511 (86%) of the recoveries were shot doubtless is a correlate of a sampling bias toward

game birds (Table 3). Many of the hawks, on the other hand, probably were gunned in misguided application of predator control and a perception that all large raptors are threats to domestic fowl and livestock. Arendt (pers. comm.) additionally pointed out that residents of many of the islands often shoot birds as “sport”, with no intention to use them as food.

287 recoveries (48%) originated in nine Canadian provinces, with the largest numbers coming from eastern Canada — Ontario (92), New Brunswick (63), Quebec (27), and Prince Edward Island (25). Of the 308 from the United States, only 22 (4%) are from states west of the Missis-

TABLE 2. Age classes of North American migrants recovered in the Lesser Antilles. A = first and second calendar year of life, B = third calendar year, C = fourth calendar year and older; numbers in parentheses are percents.

Species groups	Age classes		
	A	B	C
	32 (89)		4 (11)
	228 (92)	11 (4)	10 (4)
	5 (83)		1 (17)
	38 (95)	1 (3)	1 (3)
	3 (100)		
	125 (93)	3 (2)	7 (5)
	431 (92)	15 (3)	23 (5)

issippi River — Kansas (7), North Dakota (5), Iowa (4), Minnesota (4), South Dakota (1), and Texas (1).

New locality records (based on unconfirmed data from BBL files) include Anguilla (Great Egret and Blue-winged Teal), Barbuda (Blue-winged Teal), St. Kitts (Blue-winged Teal and Common Tern), Nevis (Blue-winged Teal), and Guadeloupe (Peregrine Falcon).

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TABLE 3. Causes of mortality and other factors (frequencies and percents) contributing to recoveries of North American migrants in the Lesser Antilles.

How obtained	BBL code	Hérons/ Egrets (Ardeidae)	Ducks (Anatidae)	Hawks (Falcon- iformes)	Shorebirds (Charadri- idae/Scol- opacidae)	Gulls (Larinae)	Terns (Sterninae)	Totals
Found dead	0	4 (11)	4 (1)	1 (14)	3 (3)	1 (33)	10 (7)	23
Shot	1	30 (83)	289 (95)	4 (57)	89 (88)	1 (33)	98 (68)	511
Starvation	2		1 (1)					1
Injury	3				1 (1)	1 (33)	3 (2)	5
Trapped ¹	4		2 (1)				1 (1)	3
Raptors or other birds	7, 9						2 (1)	2
Collisions	13, 54		1 (1)	1 (14)				2
Disease	20		1 (1)				1 (1)	2
Fishing gear	26						2 (1)	2
Caught by hand	28	1 (3)	1 (1)				10 (7)	12
Exhaustion	36		1 (1)				2 (1)	3
Banding operations	89						2 (1)	2
Unknown	47, 56							
Miscellaneous ²	98	1 (3)	5 (2)	1 (14)	6 (6)		9 (6)	22
	97				1 (1)		4 (3)	5
Totals		36	305	7	100	3	144	595

¹ Caught by or due to traps or snares other than devices used to catch birds. ² Method not covered by other codes.

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