

Louis-Pierre Vieillot (1748-1831)

Introduction

Louis-Pierre Vieillot was an important European systematist who had a great influence on the development of American and Canadian ornithology. In his early adult life he spent considerable time in the West Indies working in the family trading business. Through most of the 1770s and 1780s he appears to have been living in French Guyana in South America and on the island of Santo Domingo, in what is now the Haitian portion of the island of Hispanola. His work also seems to have taken him to other French colonies in the West Indies.

During this period Vieillot devoted considerable time to the study of North and South American birds wintering in the tropics, and resident tropical birds. About 1792 he moved to the eastern seaboard of the United States where he spent the next six years. Long before Alexander Wilson and John James Audubon, Vieillot traveled over most of the eastern United States studying and collecting birds. He also visited Nova Scotia and the Canadian frontier at Niagara Falls, although there is no evidence that he visited Upper Canada.

Before he arrived in the United States, Vieillot, unlike Wilson and Audubon, was familiar with European birds and with many North American species in their winter plumage, as a result of his years of residence and ornithological study in the West Indies. His purpose in traveling to the United States was two-fold. First, he wanted to pursue his business interests and at the same time seek refuge from the excesses of the French Revolution. Secondly, he came specifically to study the birds in their native habitats, to document their migration routes and to collect specimens in their summer and juvenile plumages in order to better identify and classify them.

While lesser known than his more celebrated contemporaries, Vieillot was a prolific and gifted ornithologist who made significant contributions to the advancement of bird classification and ecology. His most important contributions to North American ornithological literature were his two-volume *Histoire Naturelle des Oiseaux de l'Amerique septentrionale* published in Paris in 1807-1808, and the classification system and extensive ornithological descriptions he prepared for the second edition of *Nouveau Dictionnaire d'Histoire Naturelle* published between 1816 and 1819.

Two additional volumes of the *Histoire Naturelle*, half of his North American bird descriptions, were never published. Some of these detailed descriptions were eventually published in the *Nouveau Dictionnaire*. In recent years these long-lost manuscripts have been found and recently sold at auction. Eventually the details of these significant manuscripts will add to our knowledge of North American ornithology.

In North American ornithology, Vieillot is best known today for his first descriptions of 20 species of North American birds including such well-known birds as Virginia Rail, Warbling Vireo, Tree Swallow, House Wren and Cedar Waxwing. That he also made

contributions to Canadian ornithology is evident in the records in his surviving publications. It is clear that he visited Nova Scotia on more than one occasion, and that he collected and studied birds during his visits. He recorded at least nine species from there in entries in *Nouveau Dictionnaire*. Some of these are first records for Canada. His description of Least Sandpiper from Nova Scotia is a first record for this species. If his journal of these trips, or the additional volumes of descriptions in *Histoire Naturelle* are examined, some of his other observations might be first records for Canada.

This paper examines Vieillot's importance to North American ornithology. It is evident he is of greater importance than the paucity of literature written about him might suggest. (See Oehser 1948.) The treatment of Vieillot is in stark contrast to the voluminous American writings on Wilson and Audubon. This paper examines what is now known about Vieillot's life and his work.

Background

Vieillot was born at Yvetot, near Rouen, in Normandy, on May 10, 1748. Rouen is the major administrative town in Normandy. It lies on the Seine upriver from Le Havre, principal seaport for Paris. Little is known of Vieillot's early life or schooling. It is likely that after his formal education he went to work in the family business (the manufacture of painted 'rouennerie' cloth and ribbons). Given his extensive knowledge of birds, as demonstrated in his many ornithological publications, and the insightful comparisons he made between European and North American waterfowl and birds of prey in his *Histoire Naturelle*, Vieillot probably had an interest in ornithology in his childhood.

Documentation of Vieillot's early adult years is also sparse. Stresemann suggests that about 1780 Vieillot, when he was in his early 30s, emigrated with his wife to the island of Hispaniola, then known as Saint Dominique, as the overseas partner in the family business, exchanging manufactured cloth and ribbons for spices and cotton. (Stresemann 1975: 123). The family business may well have been centred in Saint Dominique, but very likely had trading links with the other French West Indian colonies including Guyana on the northeast coast of South America, and the islands of Martinique, Guadeloupe and St. Lucia, known collectively as the Antilles.

Saint Dominique was at the time a hot-bed of interest in natural history. The Cercle des Philadelphes was a prestigious organization of amateur naturalists and scientists drawn from the white population of the island, led by Louis Narcisse Baudry de Lozières (1761-1841), an attorney, who later published *Voyage à la Louisiane et sur le continent de l'Amérique septentrionale, fait dans les années 1794 à 1798* (Paris: Dentu, 1802) and the royal physician Charles Arthaud. Prominent also was the politician and writer Médéric Louis Élie Moreau de Saint Méry (1750-1819), who later moved to Philadelphia. By the late 1780s there were 160 members, including physicians, judges and lawyers, planters and merchants, and public officials like the Chevalier Lefebvre Deshayes (in correspondence with Buffon in France on domestic birds), the engineer René-Gabriel de Rabié (d. 1785), and very likely Vieillot. (Wetmore 1931: 9). The Cercle also invited foreign members, including Benjamin Franklin and Benjamin Rush.

Vieillot wrote many uncited detailed ornithological observations from the French colonies in the *Nouveau Dictionnaire* which prove that he traveled there. In his account of the Agami Heron in (*Nouvelle Dictionnaire* 1:191) Vieillot states that he saw this species in French Guyana when he lived there and proceeds to describe its behavior and habits in considerable detail. There is no doubt that his knowledge of this secretive and difficult to observe bird must have been built up over a considerable period of time.

In references to ant-thrushes, e.g. Grand Befroi (ND 12:110-112), Vieillot discusses observing this bird in Guyana in considerable detail. He mentions that he passed along his notes to Baron Buffon “who preserved the name Befroi which I had given it”. Buffon set down details of the Grand Befroi in his *Histoire Naturelle des Oiseaux*, Volume 3: 410. This work was published in 1775. There is evidence scattered throughout the *Nouveau Dictionnaire* of Vieillot’s observations in other French colonies. In his description of the Least Sandpiper which he found in Nova Scotia, he notes that he has seen them in much greater numbers in the Antilles. (*Nouveau Dictionnaire* 34:466).

In his obituary of Vieillot, Lesson suggests that while Vieillot was living in the United States he wrote Birds of South America. (Bulletin des Sciences Naturelles 25: 365-366). Vieillot’s manuscript, which Lesson describes as “an inaccurate and very incomplete work”, is not mentioned in any of the published works of Vieillot. An attempt to describe the birds of a whole continent, even if it was considered a failure, suggests that Vieillot had already conducted considerable prior research in Europe on South American ornithological writings. His extensive detailed writings on many birds in French Guyana greatly exceeds his writings on the birds of Santo Domingo and other West Indian islands in the *Nouveau Dictionnaire*. It is evident that Vieillot was based in Guyana from the late 1760s or very early 1770s. He may have resided in the West Indies for twenty years before moving to the United States in 1792.

Vieillot, like many of his generation interested in birds, was greatly influenced by the two most important French naturalist-ornithologists of the era, Methur Jacques Brisson and Baron Buffon. These authors, and Azara (Paraguay) and Leveillant (Africa) are widely cited throughout Vieillot’s bird writings in the *Nouveau Dictionnaire*. Brisson’s classic work *Ornithologie* described many thousands of birds from around the world and set a new standard of excellence in bird description and classification. Buffon was a great popularizer of natural history. He had a great influence on promoting the importance of field studies in bird classification. The character of Vieillot’s writings indicate that he was greatly influenced by both men.

Ornithologie is full of descriptions of tropical species, most sent to the great French scientist and collector, Reaumur, by his extensive network of French residents and “voyageur-naturalists”. They lived in French colonies and trading posts scattered around the world. Collectors included such well-known figures as Poivre in Madagascar, Chervain in Haiti and Jamaica, Adason in Senegal and the Comte de Bentinck in Bon Esperance. No less than four collectors sent back bird skins from French Guyana (Cayenne): Essars, Artur, de Montigny and Verron. An analysis of *Ornithologie* reveals

that Cayenne provided more specimens for Reaumur's collection and Brisson's work than from any other French possession, including New France. It is not surprising that a young Frenchman interested in ornithology and with an opportunity to travel through the family business might want to reside there. Guyana was also the residence in 1772 of the celebrated French naturalist, Charles-Nicolas-Sigisbert Sonnini de Manoncourt (1751-1812). It is not known if the two men met there but this seems likely as both were in correspondence with Buffon and Sonnini greatly contributed to Buffon's ornithological writings. Sonnini was a principal author of the ornithological sections of the first edition of *Nouveau Dictionnaire* published in the early 1800s.

In the introduction to his seminal work on North American ornithology, *Histoire Naturelle des Oiseaux de l'Amerique septentrionale*, 1808, Vieillot espouses Buffon's well-known views that in order to advance the scientific classification of birds it was important to study them in their natural habitats, study their migratory habits, and to collect specimens of male, female and juvenile plumages. Like Brisson and Buffon, and other French ornithologists of the late 18th century, Vieillot was opposed to the highly artificial nature of the binomial nomenclature of Linnaeus.

During the 1780s Vieillot returned to France with his bird notes and collection. Since he was working on his Birds of South America it is likely that his visits to France involved ornithological research in collections and libraries. In *Nouveau Dictionnaire* he mentions collecting Bohemian Waxwings in Rouen in 1776 and 1788 (ND 16: 523). It is likely that the nature of his business and his need to carry out ornithological research may have resulted in frequent trips across the Atlantic. These trans-Atlantic voyages by early residents of the New World were probably much more frequent than one might expect. The early Spanish explorer-naturalist Gonzalo Fernandez de Oviedo y Valdez crossed over the Atlantic twelve times between 1515 and 1557. (Wetmore 1931, p. 8)

Vieillot notes in his *Histoire Naturelle* that during a 1780s visit he met with Buffon who he refers to as the "French Pliny". Unfortunately Buffon was unable to use Vieillot's latest notes as he had completed the final volume, of his 9 Volume *The Natural History of Birds*, in 1783. Vieillot writes that Buffon suggested that he apply his efforts to the study of America "where numerous birds are only known from afar and new ones were there to be discovered": and that "by studying the birds of Santo Domingo and America you can unite both parts.... the study birds in their winter quarters and at their northern nesting grounds and...at the same time study the pace of migration and migratory routes". (p. 1)

Vieillot in North America

Fired by Buffon's interest and encouragement, and the immanent rebellion in France, Vieillot and his family escaped to Santo Domingo before the revolution broke out in 1789. By 1791 the American and French revolutions soon subsumed Santo Domingo. Sometime in 1792 Vieillot was forced to flee the island and he went to America to fulfill his dream. There it is likely he joined the large French émigré community from the West

Indies and France who had fled the French revolution. This community included Moreau de Mery from Haiti.

It is not certain how Vieillot provided for his family during his American residence as he appears to have devoted extensive research to ornithology. At the Ninth International Ornithological Congress, held in Rouen in 1938, (Rouen, 1938, p. 32), a Vieillot relative, M. Andre Sanson suggested that Vieillot may have been supported in his endeavour “to hunt and naturalize” birds in the Americas, by his brother, a Rouen shipowner engaged in the spice trade. It seems logical that Vieillot may have continued his career in the family shipping business.

Vieillot lived in America for six years, arriving in 1792, and leaving for France from Newcastle, Delaware, in late August, 1798. Disaster struck on the return journey as he lost his two daughters to yellow fever. (Roberts, 1947 p. 365). While he appears to have left few notes or journals, (although Stresemann suggests he had a large correspondence) it is possible through an examination of *Natural Histoire* and *Nouveau Dictionnaire* to piece together most of his North American travels. Unfortunately Vieillot never provided dates in any of his North American writings, preferring to describe the seasons of his observations.

For three years he states that he lived in New York, presumably New York City. This is evident as he mentions many places he visited including Long Island, the mountains of “Nigh-Land” and the “coasts of Tappan” which he said bordered the River Hudson. This is supported by the unusually high number of records in his writings cited from New York. He also has occasional references to New England (ND 3:337). It is likely during this period that he also visited Nova Scotia as it would have been easy to take passage to Halifax. It was there he collected and is credited with the first description of the Least Sandpiper (*Nouveau Dictionnaire* 34:466 1819). After his description is the following notation:

Le Tringa Maringouin, Tringa minutilla, Vieillot
.....I have often seen it at Halifax, and in Nova Scotia, in company with the “cincles ou alouettes de mer”, in the months of August and September. But in these areas it is less common than in the Antilles, where I have commented below, one can see them in innumerable flocks.

Note: Buffon 2008 7:521-25 calls both the cingle and alouette de Mer the Dunlin. Unfortunately for Canadian ornithology few ornithological records from Vieillot’s visits to Nova Scotia have been found. In *Histoire Naturelle* there is only two. In discussing the Moucherolle d’Acadie, he mentions the published record of this species by John Latham said to have been found in an English collection, but originally from Nova Scotia. Vieillot notes: “I did not encounter it either in Nova Scotia or the United States”. (Vol. 1:71).

While Vieillot seems certain as to which species he is referring to, it is less evident today. Unlike other contemporaries, he certainly knew that warblers and vireos were not

flycatchers. Other flycatcher records in ND eliminate Phoebe. McAtee (McAtee 1962-68) suggests Acadian Flycatcher but this is most unlikely for Nova Scotia. A much better guess is Yellow-bellied Flycatcher or Alder Flycatcher although he may never be certain of this bird's identity. For further discussion of this point see below.

In *Dictionnaire* there are a few scattered records throughout the 36 volumes to species he definitely says that he saw while in Nova Scotia. In addition to the Least Sandpiper, there are eight:

Brant
American Golden Plover
Spruce Grouse
Common Nighthawk
Ivory Gull
Gray Jay
Winter Wren
Eastern Meadowlark.

Perhaps the most interesting is his account of the Common Nighthawk.

The name of this bird is derived from the call when it is perched. I have never seen in any other part of North America as many as in Nova Scotia. They inhabit sometimes only the mountains; but one sees them today on the plains and even near towns, around dusk; they elevate into the air to a great height and fly with great speed like the swallows.....
(*Nouveau Dictionnaire* 10: 242)

Thomas Brewer in his *North American Oology* (1857) mentions an additional species, the Cliff Swallow (I:95) This relates to his discussion about the controversy which existed about the historical range of this species in northeastern North America:

Others urge the sadly less improbable supposition that it has always existed on the more northern portion of the eastern coast, where naturalists have only recently pushed their investigations, and that they have not since very materially extended the area of their habitat. In so far of this theory, they appeal to the fact that Vieillot was one of the first to receive a specimen of this bird obtained at sea off the coast of Nova Scotia.

Vieillot makes many other references in his writings, but particularly in his *Histoire Naturelle* to species whose distribution includes Canada. Not surprisingly, since Canada was not a country at the time, he makes a distinction between Nova Scotia, Canada (Ontario and Quebec), Newfoundland, Labrador and Hudson Bay. Since Vieillot never states anywhere in his writings of having actually been in "Canada" one must assume that all his references are from published authors. Indeed his writings frequently mention all the key known ornithological authors: Edwards, Charlevoix, Brisson, Pennant and Latham, the latter who he relies on for each species scientific name. Perhaps it is not

surprising that other early French writers are rarely mentioned. In particular a detailed examination of *Nouveau Dictionnaire* revealed no reference to the writings of Nicolas Denys and Baron Lahontan and single notes on the writings of Gabriel Sagard (Sandhill Crane) and Pere Leclerc (House Wren).

Occasionally, in references to Canada, Vieillot provides dates of spring arrival, especially for a few species of warbler. Since dates of arrival are not known from any of these sources it seems likely that he may have made a spring visit to southern Ontario. See below

I have found at least eight other species in Vieillot writings in which he says their range includes Nova Scotia. These birds are:

Willow Ptarmigan
Bobwhite
Passenger Pigeon
Gobe-mouche de Nouvelle Ecosse
Blackburnian Warbler
Yellow Warbler
Red-winged Blackbird
Indigo Bunting.

These eight birds may have been recorded by Vieillot but he does not categorically state he saw them himself. The only other naturalist-ornithologist known to have visited Nova Scotia up to this time was Captain Thomas Davies. Davies was a friend of Thomas Pennant and John Latham. He is strongly suspected to have passed seven of his ornithological records from Nova Scotia to Thomas Pennant and six additional species to Latham. Two birds of Pennant's Nova Scotian birds on the Vieillot's list above: Bobwhite and the Gobe-mouche de Nouvelle Ecosse.

It is possible that Pennant's Nova Scotian Bobwhite and his "Lesser Crested Fly-catcher:", might be the origin of Vieillot's Bobwhite and his "Moucherolle d'Acadie". Much more likely since there are no other ornithologists known to visit Nova Scotia during this period, the records are Vieillot's

It is curious, and very unfortunate for the historical record, that while Vieillot describes many species from his own substantial North American collection, there are only scattered references which attest to where in North America he secured them. In describing the North American ranges for each species, for example, he provides an excellent assortment of references to all the important authors, especially to his contemporary, John Latham, but only occasionally mentions his own records.

One is left to draw two possible reasons why. Certainly it is possible that Vieillot may have purchased some of the species in his North American collection rather than collected them all himself. It is also possible that he felt it unnecessary or too time-consuming to consistently include all his own records with his species descriptions.

Anyone who reads through *Histoire Naturelle* and particularly his writings in *Nouveau Dictionnaire* has to be struck by the sheer enormity of these undertakings. Perhaps it is not surprising that he consistently uses other author's references to birds in places he visited: the United States, Santo Domingo and Guyana. Certainly Vieillot, the first class ornithologist, would likely be accepting of other reliable naturalists records that he had affirmed from his own records.

In addition to living in New York, Vieillot also stated in *Histoire Naturelle* that he visited Virginia, Maryland, Pennsylvania, including visits to the Peale Museum, and New Jersey. His many references to Pennsylvania in *Nouveau Dictionnaire* indicate that he must have spent considerable time there (ND 11:218). Other than places around New York City, Vieillot rarely mentioned specific places he visited on the Atlantic coast except for two records of herons in New Jersey. These included his visit to a Black-crowned Night-Heron colony (ND 14: 427), and the nest of L'Aigrette rousse (species unknown) in large cedars (ND 14:409?). Other references to New Jersey especially Gull-billed Terns at Cape May may also be his. It is likely that the New Jersey records are from the southern part of the state.

His extended stay in New York, and presumably some time in Philadelphia, seems consistent with Vieillot's living in these key port cities and continuing to work in the shipping business. Vieillot was aware of the writings of William Bartram as he occasionally cites Bartram in *Histoire Naturelle*. It is likely that given the small number of serious ornithologists in America at this time, the two men met in Philadelphia.



Artwork of Yellow-breasted Chat from *Histoire Naturelle I*: Plate 55. Courtesy of the Biological heritage Library

Alexander Wilson arrived in Philadelphia in 1794, settling near Bartram at Grey's Ferry. Wilson does not appear to have taken up the study of American birds until late in the 1790s. There is no evidence to suggest that Vieillot met either Bartram or Wilson. Vieillot never mentions any specific reference to naturalists in the New York area either. There is one specific reference to Blackburn who collected for his sister and sent records to Thomas Pennant but Vieillot provides no indication that they met.

Vieillot also undertook extensive travels which may well have involved more than one extended trip from his base on the Atlantic coast. He mentions that he visited Niagara Falls, and his desire to study waterbirds on the Great Lakes. If he did visit Canada, it seems likely he crossed over the border at Niagara, and visited the north shore of Lake Erie by boat. In the 1790s the only settlements in the area were at Niagara and at Sandwich and nearby Detroit. Toronto was not founded until 1798 and there were no roads.

There are no records of Vieillot describing any bird he collected from Canada. However as already noted there are numerous references to "Canada" as the range for many birds, even arrival dates. I have noted Vieillot often did not include the locality of his own records. It does seem likely however that most "Canada" records were derived from Brisson with rare contributions from Charlevoix, Kalm, LeClerc and Sagard.

One anomaly, Vieillot's mention of the Eastern Meadowlark nesting in "Canada" stands out. (ND 32:204). It seems unlikely that he would have gained this knowledge from any of his published Canadian sources as meadowlarks would have been rare in Canada in the 1790s. Charles Fothergill notes the first expansion of this species into the Toronto area during the 1820s. Vieillot may have seen it at Niagara but it is more likely that he got this reference from Alexander Wilson. In all his writings, Wilson, this pioneer American ornithologist made only two references to seeing birds in Canada: Eastern Meadowlark in Upper Canada, and Purple Martin at Quebec. The Martin record is examined under the discussion of Wilson and mentioned on my paper on Thomas Davies. The meadowlark is likely a genuine record seen when Wilson visited the Niagara region in July, 1806.

Vieillot says he traversed the Ohio River, went as far west as the St. Antoine Rapids (Minneapolis, Minnesota), and ventured down the Mississippi to the Gulf of Mexico. As he noted, thus "uniting the productions of the boreal and the tropics" (p. 9) It was during this trip that he visited western Kentucky where he collected and described the first specimen of Louisiana Waterthrush. In the *Nouveau Dictionnaire* he says he collected this bird in Pennsylvania "where it arrives in May and leaves in August.....one also finds it in Kentucky and Louisiana on the solitary edges of the Mississippi: (ND 20: 234). He also collected what were likely a young Scrub Jay (ND 12: 480) and a Red-cockaded

Woodpecker (ND 26:69) in Kentucky. Vieillot also writes wistfully about traveling “with pencil in one hand and gun in the other” through Louisiana, Florida and Georgia. There are numerous uncited references in his writings which support the conclusion that he did visit these places.

Vieillot’s extended stay on the Atlantic coast, and wide travels through most of what was the United States and adjoining territories, were essential to his work. His lengthy stay in New York and Pennsylvania was deliberate as he notes: “the ornithologist needs to know places in two seasons, for in the centre, where temperatures are more moderate, is a place to see the largest number of species. Places to spend a lot of time are Virginia, Maryland, Pennsylvania, New Jersey and New York which extend between latitudes 35 and 43 degrees of north latitude”. He also rationalizes the need to spend a number of years in the central states to observe the nesting habits and male, female and juvenile plumages of the large number of species that breed there, and to observe spring and fall migrations and routes of passerines and waterfowl from boreal colder habitats further north. Amongst many other observations he was probably the first to comment on the absence of Blackpoll Warblers in the eastern United States in fall migration.

The first product of Vieillot’s American field research, and numerous years of research in European collections and amongst the works of North American bird authors, was his *Histoire Naturelle*. The first two volumes were completed in 1808, ten years after his return to France. Volume 1 contains descriptions of birds of prey, swallows, flycatchers and vireos. Volume 2 contains descriptions of thrushes, warblers, kinglets, wrens, woodpeckers, creepers and hummingbirds. An examination of these volumes reveals descriptions of 173 birds. Today some of these are not considered full species.

Vieillot noted in the introduction of Volume 1, *Histoire* that it “contains the work on the history of nearly 400 species, 50 more or less are new to science and 160 not described by Catesby, Edwards or Buffon”. Alexander Wilson undertook his American ornithological research about 1802. He published his *American Ornithology* between 1806 and 1813.

It is evident that Vieillot intended his 4 volumes would provide a complete description of all North American birds. Where relevant he cites the records from all the important works on 18th century North American ornithology including Catesby, Edwards, Brisson, Linnaeus, Buffon, Pennant and Latham. He even describes species collected on the west coast of North America by the Cook Expedition and from Peter Simon Pallas’s writings about species collected by the Russian expeditions to Alaska and the Billings Expedition as well.

The science of ornithological classification underwent huge advances during Vieillot’s lifetime. His research into the seasonal changes in plumage and plumage variations among males, females and juveniles of North American birds was of great importance in sorting out the many problems of identifying species. Vieillot certainly did not solve all these problems as a close reading of his works leave some of his descriptions of birds unidentified. While we may never know how many bona-fide species Vieillot does

describe, it is evident that his work was substantially greater and considerably more important than the historical record shows.

Volumes 3 and 4 were intended to cover the remainder of the North American bird families. In one of his earlier works, *Histoire Naturelle des plus beaux Oiseaux chanteurs de la Zone Torride*, Paris, 1805, Vieillot gives us a clue to some content in Volume 3. He briefly describes four finches included in this work: Northern Cardinal, American Goldfinch, Indigo Bunting and Painted Bunting. He justifies the brevity by explaining that he has already described them in detail in Volume 3 of *Histoire*. In addition to finches, sparrows and blackbirds, also missing from *Histoire* are his descriptions of North American waterfowl, seabirds and marsh birds. It is evident that Vieillot was a very talented ornithologist. If he had not delayed the publishing *Naturelle Histoire* for 10 years, and had produced all four volumes, the history of American ornithology would have unfolded very differently.

Vieillot's other North American bird records are known to science largely through their appearance in the *Nouveau Dictionnaire*. For posterity, it would be of great value to North American ornithology, if the manuscripts for Volumes 3 and 4 were examined. They could then be compared with the scattered North American bird records published in *Nouveau Dictionnaire*. This would allow us to know the breadth of Vieillot's writings and better assess his overall contribution to American and Canadian ornithology.

Vieillot in Europe (1798-1831)

Vieillot was a leading systematist of his day. Despite his eventual prominence in early 19th century European ornithological circles (Lesson described him as "the dean of ornithologists" (Lesson 1831), he never obtained state support in France given to Buffon who preceded him, or Cuvier who followed. On his return to France Vieillot appears to have retired from the shipping business to devote himself completely to ornithology. This life-choice may have been hastened by the consensus opinion that during the voyage from America he lost not only his two daughters but a third, and his wife. In 1798, at age 50, and without family, he probably buried himself in his work.

On returning to Paris Vieillot was able to secure a position in the law office of Charles Dumont de Sainte-Croix a wealthy amateur ornithologist. This permitted him to "continue educating himself in his chosen field through study and a lively correspondence" (Stresemann p. 123). It is likely that Vieillot's obsession with his ornithological research and publications greatly contributed to a tenuous financial existence that dogged him throughout the rest of his life. He eventually died in poverty in Rouen in 1831, aged about 82.

In addition to *Histoire Naturelle*, *Nouveau Dictionnaire* and *Oiseaux chanteurs de la Zone Torride*, Vieillot also published a number of other ornithological works. *Histoire naturelle et generale des colibris, oiseaux-mouches, jacamars et promerops* was his first major work, published in 1802. It is a stylish book with attractive glossy-feathered birds from the tropics illustrated by his friend, master engraver, Jean-Baptiste Audebert. This

work, initiated by Audebert, was completed by Vieillot after Audebert's death. This work was likely a labour of love for Vieillot. Lesson, who wrote Vieillot's obituary (Lesson 1831) noted "M. Vieillot .. was fond of raising in cages finches from different countries". Vieillot notes in *Oiseaux chanteurs de la Zone Torride* that he brought back the beautiful Painted Bunting from America to add to his caged bird collection.

Other important works included his *Analyse d'une nouvelle Ornithologie elementaire*, Paris, 1816, his treatise on classification, and *Oiseaux Francaise* published between 1821-28 and the previously mentioned Birds of South America. The volume of Vieillot's work attests to his voracious work habits and strong interest in the birdlife of the western hemisphere.

Analyse was Vieillot's ambitious attempt to reform contemporary ornithological systematics based on his years of research. Stresemann notes that "he sought to remain true to the natural relationships by introducing numerous new generic and family names, which was at first almost universally resented" (Stresemann p. 124). In this work Vieillot used Linnaean nomenclature which Stresemann notes was first introduced into his works in *Histoire Naturelle*.

With the printing of successive volumes of *Nouveau Dictionnaire* between 1816-19, his years of careful ornithological research culminated in the description of many species new to science. This included many of the 144 new bird species collected on Baudin's pioneering expedition to Australia between 1800-04. (Farber: 1997 p. 40). It is likely that if an analysis was made of the total number of bird species first described by Vieillot from all over the world, he might rank first in the world of ornithology.

Conclusion

Vieillot might not be termed a professional ornithologist in the conventional sense. Perhaps his noted taciturn personality, his lack of formal scientific training, his relative poverty, and his lack of a tenured position in an institution made it difficult for him to achieve acceptance amongst a newer generation of trained scientists like Frederick Cuvier and Jacob Temminck. Indeed his classification system, like that of Brisson before him, based mostly on external features, was giving way to a new approach by trained scientists such as Cuvier, based on the new science of comparative anatomy. Farber, writing about Cuvier's famous treatise on classification, *La Regne animal* (1817), noted:

The significance of Cuvier's ornithology is not so much in the specific ordering of birds, but in the elevation of systematics to a more scientific base. By 1800 the professors of the Museum were agreed that comparative anatomy was the key to classification. In their attitude, they were reflecting the maturation of comparative anatomy as a science, and it was Cuvier who best exemplified the power of this new study to uncover the structural relations among animals. (Farber: 1997 p. 83)

Despite formidable handicaps, and without scientific awareness of his important unpublished works, Vieillot has achieved in death a measure of immortality amongst North American ornithologists that few others of his generation can claim. One can see in

this recognition, and in his working life and collected works, the essence of the professional ornithologist. It would be difficult in fact to read his treatises on **Birds** (ND 23: 351-419), **Ornithology** (ND 24: 68-144) and other aspects of ornithology in the *Dictionnaire* without coming to the conclusion that by 1818 ornithology had achieved the status as a distinct scientific discipline. The document provided merely provide a summary of the headings in these two papers.

Today Vieillot is credited by the AOU with being the first describer of **20 North American Species**, ranking fourth behind Linnaeus (161). Gmelin (49) and Alexander Wilson (21).

Unlike Wilson, who is not credited with describing any genus, Vieillot ranks equal fourth, with credit for **17 Genus**, with 19th century systematist, William Swainson, behind even much better-known systematists: Linnaeus (30), Brisson (23) and Charles Lucien Bonaparte (19).

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