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Dutch avifaunal list: taxonomic changes in 2004–2008

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This is the third update on the taxonomy of species and higher taxa on the Dutch List since Voous (1977). It summarizes decisions made by the Commissie Systematiek Nederlandse Avifauna (CSNA) between Jan 2004 and Dec 2008. Changes in this report fall into five categories: (1) the sequence within and among some groups is changed to reflect their phylogenetic relationships (flamingos and grebes, eagles, shanks, gulls, terns, swallows and tits); (2) 20 scientific names are changed due to generic revisions (*Aquila pennata*, *A. fasciata*, *Chroicocephalus genei*, *C. philadelphia*, *C. ridibundus*, *Hydrocoloeus minutus*, *Onychoprion anaethetus*, *Sternula albifrons*, *Hydroprogne caspia*, *Megaceryle alcyon*, *Cecropis daurica*, *Geokichla sibirica*, *Cyanistes caeruleus*, *Lophophanes cristatus*, *Periparus ater*, *Poecile montanus*, *P. palustris*, *Pastor roseus*, *Agropsar sturninus*, *Melospiza melodia*); (3) two scientific names replace others presently on the list due to the recognition of extralimital taxa as species (*Turdus eunomus*, *T. atrogularis*); (4) one species is added because of a split from a species already on the Dutch List (*Sylvia subalpina*); (5) two species become monotypic due to the recognition of an extralimital taxon as species (*Tarsiger cyanurus*, *Oenanthe pleschanka*).

Key words: systematics, taxonomy, phylogeny, species, higher taxa

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INTRODUCTION

This report includes taxonomic and nomenclatural changes adopted by the Dutch committee for avian systematics (Commissie Systematiek Nederlandse Avifauna, CSNA) since Sangster *et al.* (2003). We review newly published evidence affecting the scientific names and sequence of taxa on the Dutch List. The committee consists of four members (year of election between parentheses): Arnoud B. van den Berg (1995), André J. van Loon (2002), C.S. Roselaar (1995) and George Sangster (*Secretary*, 1996). The committee's approach towards the recognition of species and higher taxa was described by Sangster *et al.* (1999). Unless otherwise stated, the sequence of species on the Dutch List remains unchanged.

The CSNA continues to work closely with the taxonomic subcommittee of the British Ornithologists' Union (BOU-TSC) and many proposals were considered simultaneously by both committees. Some of these already have been published by BOU-TSC (Sangster *et al.* 2004, 2005, 2007, Knox *et al.* 2008). Responsibility of the decisions included in this report, however, remains that of CSNA.

TAXONOMIC CHANGES

Flamingos and grebes

Phylogenetic analyses based on DNA–DNA hybridization data (van Tuinen *et al.* 2001), mitochondrial and nuclear DNA sequences (van Tuinen *et al.* 2001, Chubb

2004, Cracraft *et al.* 2004, Ericson *et al.* 2006, Brown *et al.* 2008, Hackett *et al.* 2008, Morgan-Richards *et al.* 2008, Pratt *et al.* 2009) and morphology (Mayr & Clarke 2003, Mayr 2004, Manegold 2006; but see Livezey & Zusi 2007) provide overwhelming support for a sister-group relationship of flamingos Phoenicopteriformes and grebes Podicipediformes. This clade was recently named Mirandornithes (Sangster 2005). Mirandornithes will be placed between Ciconiiformes and Accipitriformes. Within Mirandornithes, Phoenicopteriformes will precede Podicipediformes. The sequence within these groups remains unchanged.

***Aquila pennata* Booted Eagle**

Dwergarend

***Aquila fasciata* Bonelli's Eagle**

Havikarend

Recent phylogenetic studies indicate that the species currently included in *Hieraaetus* and *Aquila* do not form separate monophyletic groups (Wink & Seibold 1996, Wink *et al.* 1998, Wink 2000, Wink & Sauer-Gürth 2000, Roulin & Wink 2004, Wink & Sauer-Gürth 2004, Bunce *et al.* 2005, Helbig *et al.* 2005, Lerner & Mindell 2005). The CSNA has considered two alternative taxonomic rearrangements: (i) include all species of *Hieraaetus* and *Aquila* in a single genus (Wink & Sauer-Gürth 2004) or (ii) recognise three genera (Helbig *et al.* 2005). In view of the incongruence among studies in the placement of some eagle taxa and the lack of support for some internal nodes, we feel that recognition of three genera is not sufficiently supported. Therefore, we place the species traditionally included in *Hieraaetus* in *Aquila* (cf. Sangster *et al.* 2005). The sequence and nomenclature of the eagles on the Dutch List becomes as follows:

- Greater Spotted Eagle *Aquila clanga*
- Lesser Spotted Eagle *Aquila pomarina*
- Booted Eagle *Aquila pennata*
- Golden Eagle *Aquila chrysaetos*
- Bonelli's Eagle *Aquila fasciata*
- Steppe Eagle *Aquila nipalensis*
- Eastern Imperial Eagle *Aquila heliaca*

Taxonomic sequence of shanks *Tringa*

A recent molecular study of the shanks (Pereira & Baker 2005) offers a well-resolved phylogeny of the shanks (*Tringa*, *Actitis*, *Heteroscelus*, *Catoptrophorus*) based on mitochondrial and nuclear DNA sequences. The results of Pereira & Baker (2005) indicate that it is not necessary to include Common and Spotted Sandpiper (e.g. Johnsgard 1981) and Terek Sandpiper (e.g. Sibley &

Monroe 1990) in *Tringa*. Their results also show that the tattlers *Heteroscelus* and Willet *Catoptrophorus semipalmatus* are part of the *Tringa* clade and that a revision is warranted. The current sequence of the Dutch species of shanks (sensu Voous 1977) does not accurately reflect their phylogenetic relationships and is to be revised as follows:

- Terek Sandpiper *Xenus cinereus*
- Common Sandpiper *Actitis hypoleucos*
- Spotted Sandpiper *Actitis macularius*
- Green Sandpiper *Tringa ochropus*
- Solitary Sandpiper *Tringa solitaria*
- Spotted Sandpiper *Tringa erythropus*
- Greater Yellowlegs *Tringa melanoleuca*
- Common Greenshank *Tringa nebularia*
- Lesser Yellowlegs *Tringa flavipes*
- Marsh Sandpiper *Tringa stagnatilis*
- Wood Sandpiper *Tringa glareola*
- Common Redshank *Tringa totanus*

Generic limits of gulls

Two studies, one based on morphology (Chu 1998) and another based on mitochondrial DNA sequences (Pons *et al.* 2005) have examined phylogenetic relationships of the entire gull clade. Both studies indicate that the genus *Larus*, as currently defined (e.g. Voous 1977, Cramp & Simmons 1983), is not monophyletic.

The results of the two studies show several differences but there are also some important points of agreement. Both Chu (1998) and Pons *et al.* (2005) indicate a separate position of Swallow-tailed Gull *Creagrus furcatus*, the kittiwakes *Rissa*, Sabine's Gull *Xema sabini* and Ivory Gull *Pagophila eburnea* from all other gulls, supporting the continued recognition of these genera. Both studies indicate that the 'masked gulls' (which include Slender-billed Gull, Bonaparte's Gull and Black-headed Gull) are not part of the main clade of gulls. Both studies further indicate a sister-group relationship of Little Gull and Ross' Gull and a separate position of these two species from the main clade of gulls.

We have considered five alternative rearrangements, including those proposed by Chu (1998) and Pons *et al.* (2005). These proposals range from including all species of gulls in a single genus (Chu 1998) to recognising 10 genera, including several genera that are not presently recognised (Pons *et al.* 2005).

Recognising that strongly supported groups are also the ones that are most likely to be stable (i.e. robust to additional data), we recommend a taxonomic arrangement that is intermediate between the two extremes proposed by Chu (1998) and Pons *et al.* (2005). This

arrangement recognises the genera *Creagrus*, *Rissa*, *Xema*, *Pagophila*, *Chroicocephalus*, *Rhodostethia*, *Hydrocoloeus* and *Larus*. Recognition of each of these groups is consistent with the results of Chu (1998) and Pons *et al.* (2005) and is supported by high bootstrap values in Pons *et al.* (2005). Little Gull and Ross's Gull are sister taxa but are placed in separate genera in view of their long branch lengths in Pons *et al.* (2005).

The arrangement proposed by Pons *et al.* (2005), which includes two additional genera '*Leucophaeus*' (for some New World gulls including Franklin's Gull *L. pipixcan* and Laughing Gull *L. atricilla*) and '*Ichthyaetus*' (for southern Palearctic gulls, including Mediterranean Gull *L. melanocephalus*, Audouin's Gull *L. audouinii* and Pallas's Gull *L. ichthyaetus*), is not warranted due to low bootstrap support for the restricted '*Larus*'. The phylogenetic position of Saunders's Gull *L. saundersi* is too poorly resolved and does not support the recognition of a monotypic genus '*Saundersilarus*' (Pons *et al.* 2005). It is tentatively placed in *Chroicocephalus*, consistent with its traditional place near the 'masked gulls' and the results of Chu (1998).

We recommend to re-arrange the species on the Dutch List as follows. The sequence of the large white-headed gulls (*L. fuscus* through *L. marinus*) is left unchanged (cf. Voous 1977), pending more detailed information on their relationships.

- Ivory Gull *Pagophila eburnea*
- Sabine's Gull *Xema sabini*
- Black-legged Kittiwake *Rissa tridactyla*
- Slender-billed Gull *Chroicocephalus genei*
- Bonaparte's Gull *Chroicocephalus philadelphia*
- Black-headed Gull *Chroicocephalus ridibundus*
- Little Gull *Hydrocoloeus minutus*
- Ross's Gull *Rhodostethia rosea*
- Laughing Gull *Larus atricilla*
- Franklin's Gull *Larus pipixcan*
- Mediterranean Gull *Larus melanocephalus*
- Audouin's Gull *Larus audouinii*
- Pallas's Gull *Larus ichthyaetus*
- Common Gull *Larus canus*
- Ring-billed Gull *Larus delawarensis*
- Lesser Black-backed Gull *Larus fuscus*
- Herring Gull *Larus argentatus*
- Yellow-legged Gull *Larus michahellis*
- Caspian Gull *Larus cachinnans*
- Iceland Gull *Larus glaucooides*
- Glaucous Gull *Larus hyperboreus*
- Great Black-backed Gull *Larus marinus*

***Onychoprion anaethetus* Bridled Tern**

Brilstern

***Sternula albifrons* Little Tern**

Dwergstern

***Hydroprogne caspia* Caspian Tern**

Reuzensterne

A molecular study based on mitochondrial DNA sequences has provided a well-resolved phylogeny of the terns (Bridge *et al.* 2005). The study strongly supports the monophyly of several species groups, including the brown-winged terns (*Onychoprion*), little terns (*Sternula*), marsh terns (*Chlidonias*) and crested terns (*Thalasseus*). Monophyly of the typical black-capped terns was poorly supported due to the uncertain position of Forster's Tern *S. forsteri* and Trudeau's Tern *S. trudeaui*. The crested terns and typical black-capped terns (*Sterna*) were identified as sister-groups, with the marsh terns, Inca Tern *Larosterna inca*, Caspian and Gull-billed Terns and Large-billed Tern *Phaetusa simplex* as their successive outgroups. The little terns and brown-winged terns were placed outside this group, which means that '*Sterna*', as currently recognised (Voous 1977), is a paraphyletic group. Bridge *et al.* (2005) proposed a revision of the terns in which 12 genera are recognised. We have adopted this arrangement with the exception of *Thalasseus*, recognition of which is contra-indicated by the low bootstrap support (cf. Sangster *et al.* 2005). With this exception, we follow the taxonomy proposed by Bridge *et al.* (2005). As a result, the taxa on the Dutch List are to be listed as follows:

- Bridled Tern *Onychoprion anaethetus*
- Little Tern *Sternula albifrons*
- Gull-billed Tern *Gelochelidon nilotica*
- Caspian Tern *Hydroprogne caspia*
- Whiskered Tern *Chlidonias hybrida*
- Black Tern *Chlidonias niger*
- White-winged Tern *Chlidonias leucopterus*
- Sandwich Tern *Sterna sandvicensis*
- Forster's Tern *Sterna forsteri*
- Common Tern *Sterna hirundo*
- Roseate Tern *Sterna dougallii*
- Arctic Tern *Sterna paradisaea*

***Megaceryle alcyon* Belted Kingfisher**

Bandijsvogel

A recently published phylogenetic analysis of the kingfishers indicates that Pied Kingfisher *Ceryle rudis* is the sister taxon of the 'green' kingfishers *Chloroceryle* and is not closely related to *Ceryle alcyon* (Moyle 2006). This implies that the current treatment of *Megaceryle* as a subgenus of *Ceryle* does not accurately reflect their phy-

logenetic relationships. In view of their distinctive morphology and to avoid paraphyly of *Ceryle*, three genera of ceryline kingfishers are recognised, i.e. *Megaceryle*, *Ceryle* and *Chloroceryle*. Both Miller (1912, 1920) and Fry (1980) emphasised anatomic differences among the three groups in support for treatment as three genera (see also Pascotto *et al.* 2006). These data indicate that Belted Kingfisher should be reclassified in the genus *Megaceryle*. Belted Kingfisher (currently *Ceryle alcyon*) therefore becomes *Megaceryle alcyon* (cf. AOU 1998).

***Cecropis daurica* Red-rumped Swallow**

Roodstuitzwaluw

Red-rumped Swallow is traditionally included in *Hirundo*. Previous studies suggest that '*Hirundo*' (sensu Voous 1977) does not represent a monophyletic group of species and indicate that the red-rumped swallows *Cecropis* are not part of the clade of typical mud-nesting martins (Sheldon & Winkler 1993, Sheldon *et al.* 1999). A recent study, which included nearly all recognised swallow species, provided strong support for the position of Red-rumped Swallow in *Cecropis* (Sheldon *et al.* 2005). The scientific name of Red-rumped Swallow (currently *Hirundo daurica*) thus becomes *Cecropis daurica* (cf. Dickinson 2003, Sangster *et al.* 2005).

The current sequence of the Dutch species of swallows (sensu Voous 1977) does not accurately reflect their phylogenetic relationships and is to be revised as follows:

- Sand Martin *Riparia riparia*
- Eurasian Crag Martin *Ptyonoprogne rupestris*
- Barn Swallow *Hirundo rustica*
- Common House Martin *Delichon urbicum*
- Red-rumped Swallow *Cecropis daurica*

***Tarsiger cyanurus* Red-flanked Bluetail**

Blauwstaart

Red-flanked Bluetail and Himalayan Bluetail *T. rufilatus* differ in song, calls, adult plumage and biometrics (Cramp 1988, Martens & Eck 1995, Roselaar & Shirihai, in prep.). Red-flanked and Himalayan Bluetail are therefore best treated as two species. As a result, Red-flanked Bluetail becomes a monotypic species (cf. Knox *et al.* 2008).

***Oenanthe pleschanka* Pied Wheatear**

Bonte Tapuit

Pied Wheatear and Cyprus Pied Wheatear *O. cyprica* are best treated as two species based on differences in song, female plumage, the extent of sexual dimorphism in plumage and biometrics, habitat selection and

behaviour (Christensen 1974, Sluys & van den Berg 1982, Svensson 1992, Small 1994, Flint 1995). Pied Wheatear thus becomes a monotypic species.

***Geokichla sibirica* Siberian Thrush**

Siberische Lijster

Recent phylogenetic studies have shown that the genus *Zoothera* – as recognised by Voous (1977) – comprises two clades that are not closely related (Klicka *et al.* 2005, Voelker & Klicka 2008). One clade (the *Zoothera* clade) includes *Zoothera dauma* and several Indo-Malayan and Australasian species. The other clade (the *Geokichla* clade) includes several African and Indo-Malayan species. Siberian Thrush is not part of the *Zoothera* clade but part of the *Geokichla* clade (Klicka *et al.* 2005, Voelker & Outlaw 2008; see also Voelker & Klicka 2008). We follow Voelker & Outlaw (2008) and place Siberian Thrush in *Geokichla*. Consequently, the scientific name of Siberian Thrush (currently *Zoothera sibirica*) becomes *Geokichla sibirica*.

***Turdus eunomus* Dusky Thrush**

Bruine Lijster

Naumann's Thrush *T. naumanni* and Dusky Thrush show differences in the pattern and/or coloration of head, upperparts, breast, tail, bill and legs (e.g. Cramp 1988, Clement 1999) and in habitat (Roselaar & Shirihai, in prep.). Naumann's and Dusky Thrushes are therefore best treated as two distinct species (cf. Stepanyan 1990, Helbig 2005, Knox *et al.* 2008). Until recently, Naumann's Thrush *T. naumanni* and Dusky Thrush were combined in a single species based on the existence of intermediate specimens. However, no detailed studies of the interactions of Naumann's and Dusky Thrushes in the zone of contact are available and there is no evidence to suggest that these taxa are merging into a single population. A recent study concluded that the breeding ranges of Naumann's and Dusky Thrushes do not overlap and that hybridisation is relatively rare (Roselaar & Shirihai, in prep.).

***Turdus atrogularis* Black-throated Thrush**

Zwartkeellijster

A review of the distribution and interactions of Red-throated Thrush *T. ruficollis* and Black-throated Thrush, in combination with previously described differences in morphology (Portenko 1981, Cramp 1988, Clement 1999) suggests that these taxa are best treated as species (cf. Stepanyan 1990, Ernst 1996, Helbig 2005, Knox *et al.* 2008).

Red-throated and Black-throated Thrushes co-exist in a zone that spans several 100 km. Both taxa are

found together near Razdolinsk, Russia (Gibet *et al.* 1967), in the Kuraj plateau, eastern Altay mountains, Russia (Ernst 1992, 1996), in the Zapadnyy Sayan (= West Sayan) mountains (Yanushevich & Yurlov 1950, Prokofyev 1988, Rogacheva 1992), in the Tuva region (Berman & Zabelin 1963) and in the Manskoye Belogorye mountains (Kim & Pakulov 1959) and other parts of the Vostochny Sayan (= East Sayan) mountains (Yudin 1952). In some areas, Red-throated and Black-throated Thrushes occur syntopically. Both taxa are found in all forests in the Bolshiye Ury river basin, Zapadnyy Sayan mountains (Prokofyev 1988) and in both the dark-coniferous taiga and subalpine belt of the Manskoye Belogorye mountains, Vostochny Sayan mountains (Kim & Pakulov 1959). Nests of Red-throated and Black-throated Thrushes have been found within 30–40 m of each other in the Tuva region, Russia (Berman & Zabelin 1963). In other parts of the overlap zone, Red-throated and Black-throated Thrushes occupy different habitats (Folitarek & Dementiev 1938, Yudin 1952, Stakeev 1979, Ernst 1992, 1996, Rochacheva 1992).

Field observations suggest that interbreeding between Red-throated and Black-throated Thrushes is very limited in Mongolia (Mauersberger 1980) and absent in the eastern Altay, Russia (Ernst 1992, 1996). Mixed pairs of Red-throated and Black-throated Thrushes have never been observed (Ernst 1996). In the Sayan mountains, young Black-throated Thrushes have been found two to three weeks earlier than young Red-throated Thrushes (Ernst 1992). It has been suggested that a difference in the timing of breeding may prevent hybridisation of Red-throated and Black-throated Thrushes (Ernst 1996) and may contribute to reproductive isolation.

Previous reports of extensive intergradation may have been based on misidentification of ‘pure’ specimens. Occurrence of black malar stripes or throat streaks in *ruficollis*-like birds is not an indication of hybridisation but fall within the normal range of variation of Red-throated Thrushes (Roselaar & Shirihai, in prep.).

A preliminary study of vocalisations, based on a small sample of Red-throated Thrushes and one Black-throated Thrush, indicated that their songs might be very different (Arkhipov *et al.* 2003).

***Sylvia cantillans* Subalpine Warbler**

Baardgrasmus

***Sylvia subalpina* Moltoni’s Warbler**

Moltoni’s Beardgrasmus

Moltoni’s Warbler (currently ‘*S. c. moltonii*’) differs from

other Subalpine Warbler taxa in plumage, moult, timing of breeding, habitat and contact calls (Gargallo 1994, Shirihai *et al.* 2001, Brambilla *et al.* 2007). Recent studies have shown that the breeding ranges of Moltoni’s Warbler and nominate Subalpine Warbler *S. c. cantillans* overlap at several localities in mainland Italy without evidence for interbreeding (Brambilla *et al.* 2006, 2008a,c). Playback tests conducted within and outside the area of overlap in Italy have demonstrated that the two groups do not respond to each other’s songs (Brambilla *et al.* 2008a). A molecular phylogenetic study indicated that Moltoni’s Warbler and Subalpine Warbler form separate clades and failed to find evidence for gene flow, even in areas where the two forms have overlapping breeding ranges (Brambilla *et al.* 2008b). The level of sequence divergence between Moltoni’s Warbler and other Subalpine Warbler taxa is consistent with those typically observed in species taxa, including several pairs of *Sylvia* warblers (Brambilla *et al.* 2008b). Therefore, Moltoni’s Warbler and Subalpine Warbler are best treated as separate species (cf. Brambilla *et al.* 2008a,b,c). The correct scientific name for Moltoni’s Warbler is *Sylvia subalpina* Temminck, 1820, rather than *Sylvia moltonii* Orlando, 1937 (Baccetti *et al.* 2007). Pending further research, Subalpine Warbler includes the forms *cantillans*, *albistriata* and *inornata* (cf. Brambilla *et al.* 2008b).

Generic limits of tits

Molecular phylogenetic analysis of the tits (Paridae) based on mitochondrial DNA sequences (Gill *et al.* 2005) suggests the existence of six major clades among species traditionally included in *Parus*: blue tits (‘*Cyanistes*’), great tits (‘*Parus*’), North American crested tits (‘*Baeolophus*’), Eurasian crested tits (‘*Lophophanes*’), coal tits (‘*Periparus*’) and chickadees (‘*Poecile*’). The data indicate that the blue tits (*P. caeruleus*, *P. cyanus*) are sister to all other species of tits (Paridae). However, their phylogenetic position relative to Yellow-browed Tit *Sylviparus modestus* and Sultan Tit *Melanochlora sultanea* differed between analyses. Hume’s Ground-Jay *Pseudopodoces humilis*, previously misclassified in Corvidae, was sister to the great tits in one analysis but sister to all tits except ‘*Cyanistes*’, *Sylviparus* and *Melanochlora* in another. The position of *Pseudopodoces humilis* among tits was previously suggested by James *et al.* (2003) based on morphological and preliminary mitochondrial DNA data. Gill *et al.* (2005) proposed to recognise nine genera of tits. They argued that, in addition to *Pseudopodoces*, *Sylviparus* and *Melanochlora*, the six groups of *Parus* should each be elevated to generic

level. We have adopted the arrangement proposed by Gill *et al.* (2005) based on the following considerations: (i) *Parus* would not be monophyletic if the status quo is maintained, (ii) inclusion of *Pseudopodoces*, *Sylviparus* and *Melanochlora* in *Parus* would result in an even more diverse taxon, (iii) *Parus* is one of the largest genera of birds; its subdivision into several genera would add phylogenetic information, (iv) the major groups of tits are characterised by high genetic distances in all molecular data sets, i.e. proteins (Gill *et al.* 1989), DNA–DNA hybridisation (Sheldon *et al.* 1992, Slikas *et al.* 1996) and mitochondrial DNA sequences (Gill *et al.* 2005), and (v) there is growing international support for the break-up of *Parus* into several genera (e.g. AOU 1997, Gill *et al.* 2005, Sangster *et al.* 2005, Clements 2007). The gender of the name *Poecile* is controversial; we follow David & Gosselin (2008) and treat *Poecile* as masculine. The tits on the Dutch List should be listed as follows:

- Blue Tit *Cyanistes caeruleus*
- Great Tit *Parus major*
- Crested Tit *Lophophanes cristatus*
- Coal Tit *Periparus ater*
- Willow Tit *Poecile montanus*
- Marsh Tit *Poecile palustris*

Generic limits and sequence of starlings

Phylogenetic analyses of mitochondrial and nuclear DNA sequences (Lovette & Rubenstein 2007, Lovette *et al.* 2008, Zuccon *et al.* 2008) have clarified the evolutionary relationships among the starlings. These studies indicate that Rosy Starling and Daurian Starling are more closely related to the mynas than to Common and Spotless Starlings. We adopt the generic revision proposed by Lovette *et al.* (2008) and Zuccon *et al.* (2008). Rosy Starling (currently *Sturnus roseus*) becomes *Pastor roseus*, and Daurian Starling (currently *Sturnus sturninus*) becomes *Agropsar sturninus*. The starlings on the Dutch list should be listed in the following sequence:

- Common Starling *Sturnus vulgaris*
- Rosy Starling *Pastor roseus*
- Daurian Starling *Agropsar sturninus*

Melospiza melodia Song Sparrow

Zangors

Although the name *Melospiza melodia* has been used for Song Sparrow for a long time (e.g. AOU 1983), the species was placed in *Zonotrichia* by Voous (1977). Phylogenetic studies based on allozymes (Zink 1982), mitochondrial DNA sequences (Zink & Blackwell 1996, Carson & Spicer 2003), and morphological, behav-

oural, oological and allozymic characters (Patten & Fugate 1998) indicate that Song Sparrow is closely related to Swamp Sparrow *Melospiza georgiana* and Lincoln's Sparrow *M. lincolnii* and is not part of *Zonotrichia*. The hypothesis of a close relationship between Song Sparrow, *M. georgiana* and *M. lincolnii* is also supported by a supertree analysis (Jönsson & Fjeldså 2006). The correct scientific name of Song Sparrow is therefore *Melospiza melodia*. Song Sparrow was recently added to the Dutch List (Wolf & Ebels 2006).

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REFERENCES

- American Ornithologists' Union (AOU) 1983. Check-list of North American birds. 6th edition. American Ornithologists' Union, Washington, DC.
- American Ornithologists' Union (AOU) 1997. Forty-first supplement to the American Ornithologists' Union Check-list of North Am. Birds. *Auk* 114: 542–552.
- American Ornithologists' Union (AOU) 1998. Check-list of North American birds. 7th edition. American Ornithologists' Union, Washington, DC.
- Arkipov V.Yu., Wilson M.G. & Svensson L. 2003. Song of the Dark-throated Thrush. *Brit. Birds* 96: 79–83.
- Baccetti N., Massa B. & Violani C. 2007. Proposed synonymy of *Sylvia cantillans moltonii* Orlando, 1937, with *Sylvia cantillans subalpina* Temminck, 1820. *Bull. Brit. Ornithol. Club* 127: 107–110.
- Berman D.I. & Zabelin V.I. 1963. New material of the avifauna of Tuva. *Ornitologiya* 6: 153–160. (In Russian)
- Brambilla M., Florenzano G.T., Sorace A. & Guidali F. 2006. Geographical distribution of Subalpine Warbler *Sylvia cantillans* subspecies in mainland Italy. *Ibis* 148: 568–571.
- Brambilla M., Janni O., Guidali F. & Sorace A. 2008a. Song perception among incipient species as a mechanism for reproductive isolation. *J. Evol. Biol.* 21: 651–657.
- Brambilla M., Quaglierini A., Reginato F., Vitulano S. & Guidali F. 2008c. Syntopic taxa in the *Sylvia cantillans* species complex. *Acta Ornithol.* 43: 217–220.
- Brambilla M., Reginato F. & Guidali F. 2007. Habitat use by Moltoni's Warbler *Sylvia cantillans moltonii* in Italy. *Ornis Fenn.* 84: 91–96.
- Brambilla M., Vitulano S., Spina F., Baccetti N., Gargallo G., Fabbri E., Guidali F. & Randi E. 2008b. A molecular phylogeny of the *Sylvia cantillans* complex: cryptic species within the Mediterranean basin. *Mol. Phylogen. Evol.* 48: 461–472.

- Bridge E.S., Jones A.W. & Baker A.J. 2005. A phylogenetic framework for the terns (Sternini) inferred from mtDNA sequences: implications for taxonomy and plumage evolution. *Mol. Phylogen. Evol.* 35: 459–469.
- Brown J.W., Rest J.S., Garcia-Moreno J., Sorenson M.D. & Mindell D.P. 2008. Strong mitochondrial DNA support for a Cretaceous origin of modern avian lineages. *BMC Biology* 6: 6.
- Bunce M., Szulkin M., Lerner H.R., Barnes I., Shapiro B., Cooper A. & Holdaway R.N. 2005. Ancient DNA provides new insights into the evolutionary history of New Zealand's extinct giant eagle. *PLoS Biol.* 3(1): e9.
- Carson R.J. & Spicer G.S. 2003. A phylogenetic analysis of the emberizid sparrows based on three mitochondrial genes. *Mol. Phylogen. Evol.* 29: 43–57.
- Christensen S. 1974. Notes on the plumage of the female Cyprus Pied Wheatear. *Ornis Scand.* 5: 47–52.
- Chubb A.L. 2004. New nuclear evidence for the oldest divergence among neognath birds: the phylogenetic utility of ZENK. *Mol. Phylogen. Evol.* 30: 140–151.
- Chu P.C. 1998. A phylogeny of the gulls (Aves: Larinae) inferred from osteological and integumentary characters. *Cladistics* 14: 1–43.
- Clement P. 1999. Kennzeichen und Taxonomie von Bechsteindrossel *Turdus ruficollis* und Naumanndrossel *T. naumanni*. *Limicola* 13: 217–250.
- Clements J.F. 2007. The Clements Checklist of Birds of the World. Sixth edition. Cornell University Press, Ithaca.
- Cracraft J., Barker F.K., Braun M., Harshman J., Dyke G.J., Feinstein J., Stanley S., Cibois A., Schikler P., Beresford P., García-Moreno J., Sorenson M.D., Yuri T. & Mindell D.P. 2004. Phylogenetic relationships among modern birds (Neornithes): towards an avian tree of life. In: Cracraft J. & Donoghue M. (eds) *Reconstructing the tree of life*. Oxford Univ. Press, Oxford, pp. 468–489.
- Cramp S. (ed.) 1988. The birds of the Western Palearctic, 5. Oxford Univ. Press, Oxford.
- Cramp S. & Simmons K.E.L. (eds) 1983. The birds of the Western Palearctic, 3. Oxford Univ. Press, Oxford.
- David N. & Gosselin M. 2008. Grammatical gender of *Poecile* and *Leptopoecile*. *Dutch Birding* 30: 19.
- Dickinson E.C. (ed.) 2003. The Howard and Moore complete checklist of the birds of the world. Third edition. Christopher Helm, London.
- Ericson P.G.P., Anderson C.L., Britton T., Elzanowski A., Johansson U.S., Källersjö M., Ohlson J.I., Parsons T.J., Zuccon D. & Mayr G. 2006. Diversification of Neoaves: integration of molecular sequence data and fossils. *Biol. Lett.* 2: 543–547.
- Ernst S. 1992. Zur Vogelwelt des Östlichen Altai. *Mitt. Zool. Mus. Berlin* 68 Suppl. Ann. Ornithol. 16: 3–59.
- Ernst S. 1996. Zweiter Beitrag zur Vogelwelt des Östlichen Altai. *Mitt. Zool. Mus. Berlin* 72 Suppl. Ann. Ornithol. 20: 123–180.
- Flint P. 1995. Separation of Cyprus Pied Wheatear from Pied Wheatear. *Brit. Birds* 88: 230–241.
- Folitarek S.S. & Dementiev G.P. 1938. Birds of the Altai State Reserve. *Trav. Réserve État Altai* 1: 7–91. (In Russian)
- Fry C.H. 1980. The evolutionary biology of the kingfishers (Aleciniidae). *Living Bird* 18: 113–160.
- Gibet L.A., Artamoshin A.S. & Selivonin Ye.A. 1967. On the distribution of some birds in central Siberia. *Ornithologiya* 8: 341. (In Russian)
- Gill F.B., Funk D.H. & Silverin B. 1989. Protein relationships among titmice (*Parus*). *Wilson Bull.* 101: 182–197.
- Gill F.B., Slikas B. & Sheldon F.H. 2005. Phylogeny of titmice (Paridae): II. Species relationships based on sequences of the mitochondrial cytochrome-b gene. *Auk* 122: 121–143.
- Hackett S.J., Kimball R.T., Reddy S., Bowie R.C.K., Braun E.L., Braun M.J., Chojnowski J.L., Cox W.A., Han K.-L., Harshman J., Huddleston C.J., Marks B.D., Miglia K.J., Moore W.S., Sheldon F.H., Steadman D.W., Witt C.C. & Yuri T. 2008. A phylogenomic study of birds reveals their evolutionary history. *Science* 320: 1763–1768.
- Helbig A.J. 2005. Anmerkungen zur Systematik und Taxonomie der Artenliste der Vögel Deutschlands. *Limicola* 19: 112–128.
- Helbig A.J., Kocum A., Seibold I. & Braun M.J. 2005. A multi-gene phylogeny of aquiline eagles (Aves: Accipitriformes) reveals extensive paraphyly at the genus level. *Mol. Phylogen. Evol.* 35: 147–164.
- James H.F., Ericson P.G.P., Slikas B., Lei F.-M., Gill F.B. & Olson S.L. 2003. *Pseudopodoces humilis*, a misclassified terrestrial tit (Paridae) of the Tibetan Plateau: evolutionary consequences of shifting adaptive zones. *Ibis* 145: 185–202.
- Jönsson K.A. & Fjeldså J. 2006. A phylogenetic supertree of oscine passerine birds (Aves: Passeri). *Zool. Scr.* 35: 149–186.
- Kim T.A. & Pakulov V.A. 1959. The results of the passerine bird censusing in the Manskoye Byelogorye Massif, East Sayans. *Ann. Krasnoyarsk State Pedagogical Inst.* 15: 257–263. (In Russian)
- Klicka J., Voelker G. & Spellman G.M. 2005. A molecular phylogenetic analysis of the "true thrushes" (Aves: Turdinae). *Mol. Phylogen. Evol.* 34: 486–500.
- Knox A.G., Collinson J.M., Parkin D.T., Sangster G. & Svensson L. 2008. Taxonomic recommendations for British birds: fifth report. *Ibis* 150: 833–835.
- Lerner H.R.L. & Mindell D.P. 2005. Phylogeny of eagles, Old World vultures, and other Accipitridae based on nuclear and mitochondrial DNA. *Mol. Phylogen. Evol.* 37: 327–346.
- Livezey B.C. & Zusi R.L. 2007. Higher-order phylogeny of modern birds (Theropoda, Aves: Neornithes) based on comparative anatomy. II. Analysis and discussion. *Zool. J. Linn. Soc.* 149: 1–95.
- Lovette I.J. & Rubenstein D.R. 2007. A comprehensive molecular phylogeny of the starlings (Aves: Sturnidae) and mockingbirds (Aves: Mimidae): congruent mtDNA and nuclear trees for a cosmopolitan avian radiation. *Mol. Phylogen. Evol.* 44: 1031–1056.
- Lovette I.J., McCleery B.V., Talaba A.L. & Rubenstein D.R. 2008. A complete species-level molecular phylogeny for the "Eurasian" starlings (Sturnidae: *Sturnus*, *Acridotheres*, and allies): recent diversification in a highly social and dispersive avian group. *Mol. Phylogen. Evol.* 47: 251–260.
- Manegold A. 2006. Two additional synapomorphies of grebes Podicipedidae and flamingos Phoenicopteridae. *Acta Ornithol.* 41: 79–82.
- Martens J. & Eck S. 1995. Towards an ornithology of the Himalayas: systematics, ecology and vocalizations of Nepal birds. *Bonn. Zool. Monogr.* 38: 1–445.
- Mauersberger G. 1980. Ökofaunistische und biologische Beiträge zur Avifauna mongolica. II. Gruiformes bis Passeriformes. *Mitt. Zool. Mus. Berlin* 56 Suppl. Ann. Ornithol. 4: 77–164.

- Mayr G. 2004. Morphological evidence for sister group relationship between flamingos (Aves: Phoenicopteridae) and grebes (Podicipedidae). *Zool. J. Linn. Soc.* 140: 157–169.
- Mayr G. & Clarke J. 2003. The deep divergences of neornithine birds: a phylogenetic analysis of morphological characters. *Cladistics* 19: 527–553.
- Miller W. deW. 1912. A revision of the classification of the kingfishers. *Bull. Am. Mus. Nat. Hist.* 31: 239–311.
- Miller W. deW. 1920. The genera of ceryline kingfishers. *Auk* 37: 422–429.
- Morgan-Richards M., Trewick S.A., Bartosch-Harlid A., Kardialsky O., Phillips M.J., McLenachan P.A. & Penny D. 2008. Bird evolution: testing the metaves clade with six new mitochondrial genomes. *BMC Evolutionary Biology* 8: 20.
- Moyle R.G. 2006. A molecular phylogeny of kingfishers (Alcedinidae) with insights into early biogeographic history. *Auk* 123: 487–499.
- Pascotto M.C., Höfling E. & Donatelli R.J. 2006. The Ringed Kingfisher, *Ceryle* or *Megaceryle torquata* (Cerylinae, Alcedinidae, Coraciiformes)? An osteological view. *Ornitol. Neotrop.* 17: 481–490.
- Patten M.A. & Fugate M. 1998. Systematic relationships among the emberizid sparrows. *Auk* 115: 412–424.
- Pereira S.L. & Baker A.J. 2005. Multiple gene evidence for parallel evolution and retention of ancestral morphological states in the shanks (Charadriiformes: Scolopacidae). *Condor* 107: 514–526.
- Pons J.-M., Hassanin A. & Crochet P.-A. 2005. Phylogenetic relationships within the Laridae (Charadriiformes: Aves) inferred from mitochondrial markers. *Mol. Phylogen. Evol.* 37: 686–699.
- Portenko L.A. 1981. Geographical variation in Dark-throated Thrushes (*Turdus ruficollis* Pallas). *Trudy Zool. Inst. Akad. Nauk SSSR/Proc. Zool. Inst. Acad. Sci. USSR* 102: 72–109. (In Russian)
- Pratt R.C., Gibb G.C., Morgan-Richards M., Phillips M.J., Henny M.D. & Penny D. 2009. Towards resolving deep Neoaves phylogeny: data, signal enhancement and priors. *Mol. Biol. Evol.* 26: 313–326.
- Prokofyev S.M. 1988. Birds of the Bolshiye Ury river basin (Sayano-Shushensky Reserve). In: Contributions to the fauna of central Siberia and the adjacent regions of Mongolia. *Inst. Animal Morph. and Ecol., USSR Acad. Sci. Pub., Moscow*, pp. 97–112. (In Russian)
- Rogacheva H. 1992. The birds of Central Siberia. *Husum Drück- und Verlagsges., Husum*.
- Roselaar C.S. & Shirihai H. In prep. Handbook of Geographical Variation and Distribution of Palearctic birds. Vol 1, Passerines. A & C Black, London.
- Roulin A. & Wink M. 2004. Predator-prey relationships and the evolution of colour polymorphism: a comparative analysis in diurnal raptors. *Biol. J. Linn. Soc.* 81: 565–578.
- Sangster G. 2005. A name for the flamingo-grebe clade. *Ibis* 147: 612–615.
- Sangster G., Collinson J.M., Helbig A.J., Knox A.G. & Parkin D.T. 2004. Taxonomic recommendations for British birds: second report. *Ibis* 146: 153–157.
- Sangster G., Collinson J.M., Helbig A.J., Knox A.G. & Parkin D.T. 2005. Taxonomic recommendations for British birds: third report. *Ibis* 147: 821–826.
- Sangster G., Collinson J.M., Knox A.G., Parkin D.T. & Svensson L. 2007. Taxonomic recommendations for British birds: fourth report. *Ibis* 149: 853–857.
- Sangster G., Hazevoet C.J., van den Berg A.B., Roselaar C.S. & Sluys R. 1999. Dutch avifaunal list: species concepts, taxonomic instability, and taxonomic changes in 1977–1998. *Ardea* 87: 139–165.
- Sangster G., van den Berg A.B., van Loon A.J. & Roselaar C.S. 2003. Dutch avifaunal list: taxonomic changes in 1999–2003. *Ardea* 91: 279–285.
- Sheldon F.H. & Winkler D.W. 1993. Intergeneric phylogenetic relationships of Swallows estimated by DNA–DNA hybridization data. *Auk* 110: 798–824.
- Sheldon F.H., Slikas B., Kinnarney M., Gill F.B., Zhao E. & Silverin B. 1992. DNA–DNA hybridization evidence of phylogenetic relationships among major lineages of *Parus*. *Auk* 109: 173–185.
- Sheldon F.H., Whittingham L.A. & Winkler D.W. 1999. A comparison of cytochrome b and DNA hybridization data bearing on the phylogeny of swallows (Aves: Hirundinidae). *Mol. Phylogen. Evol.* 11: 320–331.
- Sheldon F.H., Whittingham L.A., Moyle R.G., Slikas B. & Winkler D.W. 2005. Phylogeny of swallows (Aves: Hirundinidae) estimated from nuclear and mitochondrial DNA sequences. *Mol. Phylogen. Evol.* 35: 254–270.
- Shirihai H., Gargallo G., Helbig A.J., Harris A. & Cottridge D. 2001. *Sylvia* warblers: identification, taxonomy and phylogeny of the genus *Sylvia*. Helm, London.
- Sibley C.G. & Monroe B.L. 1990. Distribution and taxonomy of birds of the world. Yale Univ. Press, New Haven.
- Slikas B., Sheldon F.H. & Gill F.B. 1996. Phylogeny of titmice (Paridae): I. Estimate of relationships among subgenera based on DNA–DNA hybridization. *J. Avian Biol.* 27: 70–82.
- Sluys R. & van den Berg M. 1982. On the specific status of the Cyprus Pied Wheatear '*Oenanthe cyprica*'. *Ornis Scand.* 13: 123–128.
- Small B.J. 1994. Separation of Pied Wheatear and Cyprus Pied Wheatear. *Dutch Birding* 16: 177–185.
- Stakheev V.A. 1979. On the ecology of Black-throated and Red-throated thrushes in the Altay Reserve. In: Labutin Yu.V. (ed.) *Migratsii i ekologiya ptits Sibiri*. Yakut. Fil. Sib. Otd. Akad. Nauk SSSR, Yakutsk, pp. 184–186. (In Russian)
- Stepanyan L.S. 1990. Conspectus of the ornithological fauna of the USSR. Academy of Sciences, Moscow. (In Russian)
- Svensson L. 1992. Identification guide to European passerines. Fourth edition. Stockholm.
- van Tuinen M., Butvill D.B., Kirsch J.A.W. & Hedges S.B. 2001. Convergence and divergence in the evolution of aquatic birds. *Proc. R. Soc. London B* 268: 1345–1350.
- Voelker G. & Klicka J. 2008. Systematics of *Zoothera* thrushes, and a synthesis of true thrush molecular systematic relationships. *Mol. Phylogen. Evol.* 49: 377–381.
- Voelker G. & Outlaw D. 2008. Establishing a perimeter position: speciation around the Indian Ocean Basin. *J. Evol. Biol.* 21: 1779–1788.
- Voous K.H. 1977. List of recent Holarctic bird species. Brit. Ornithol. Union, London.
- Wink M. 2000. Advances in DNA studies of diurnal and nocturnal raptors. In: Chancellor R.D. & Meyburg B.-U. (eds) *Raptors at Risk*. WWGBP, Berlin / Hancock House, Surrey, pp. 831–844.

- Wink M. & Sauer-Gürth H. 2000. Advances in the molecular systematics of African raptors. In: Chancellor R.D. & Meyburg B.-U. (eds) *Raptors at Risk*. WWGBP, Berlin / Hancock House, Surrey, pp. 135–147.
- Wink M. & Sauer-Gürth H. 2004. Phylogenetic relationships in diurnal raptors based on nucleotide sequences of mitochondrial and nuclear marker genes. In: Chancellor R.D. & Meyburg B.-U. (eds) *Raptors Worldwide*. WWGBP, Berlin, pp. 483–498.
- Wink M. & Seibold I. 1996. Molecular phylogeny of Mediterranean raptors (family Accipitridae and Falconidae). In: Muntaner J. & Mayol J. (eds) *Biología y conservación de las rapaces Mediterráneas*. Monogr. 4 SEO, Madrid, pp. 335–344.
- Wink M., Seibold I., Lotfikhah F. & Bednarek W. 1998. Molecular systematics of holarctic raptors (order Falconiformes). In: Chancellor R.D., Meyburg B.-U. & Ferrero J.J. (eds) *Holarctic birds of prey*. WWGBP, Berlin, pp. 29–48.
- Wolf P.A. & Ebels E.B. 2007. Zanggors op Kabbelaarsbank in april 2006. *Dutch Birding* 29: 31–33.
- Yanushevich A.I. & Yurlov K.T. 1950. Vertical distribution of mammals and birds in the West Sayan mountains. *Annals of the West Siberian Section, USSR Acad. Sci., Biol Ser.* 3 (2): 3–33. (In Russian)
- Yudin K.A. 1952. Observations on the distribution and biology of birds of the Krasnoyarsk Territory. *Ann. Zool. Inst. USSR Acad. Sci.* 9 (part 5): 1029–1060. (In Russian)
- Zink R.M. 1982. Patterns of genic and morphologic variation among sparrows in the genera *Zonotrichia*, *Melospiza*, *Junco*, and *Passerella*. *Auk* 99: 632–649.
- Zink R.M. & Blackwell R.C. 1996. Patterns of allozyme, mitochondrial DNA, and morphometric variation in four sparrow genera. *Auk* 113: 59–67.
- Zuccon D., Pasquet E. & Ericson P.G.P. 2008. Phylogenetic relationships among Palearctic–Oriental starlings and mynas (genera *Sturnus* and *Acridotheres*: Sturnidae). *Zool. Scr.* 37: 469–481.

SAMENVATTING

In dit derde overzicht sinds de publicatie van Voous (1977) worden de beslissingen besproken die de Commissie Systematiek Nederlandse Avifauna (CSNA) in de periode van januari 2004 tot december 2008 heeft genomen over taxonomische wijzigingen van vogelsoorten die op de Nederlandse lijst staan. De wijzigingen kunnen worden onderverdeeld in vijf groepen: (1) de volgorde van sommige soorten en groepen is aangepast, zodat deze overeenkomt met de huidige inzichten over hun fylogenetische verwantschap (flamingo's en futen, arenden, ruiters, meeuwen, sterns, zwaluwen en mezen); (2) 20 wetenschappelijke namen zijn gewijzigd als resultaat van revisies op het genusniveau (*Aquila pennata*, *A. fasciata*, *Chroicocephalus genei*, *C. philadelphia*, *C. ridibundus*, *Hydrocoloeus minutus*, *Onychoprion anaethetus*, *Sternula albifrons*, *Hydroprogne caspia*, *Megasceryle alcyon*, *Cecropis daurica*, *Geokichla sibirica*, *Cyanistes caeruleus*, *Lophophanes cristatus*, *Periparus ater*, *Poecile montanus*, *P. palustris*, *Pastor roseus*, *Agropsar sturninus*, *Melospiza melodia*); (3) de namen van twee soorten worden gewijzigd, omdat de taxa waartoe deze voorheen werden gerekend nu als aparte soorten worden beschouwd (*Turdus eunomus*, *T. atrogularis*); (4) één soort wordt toegevoegd aan de Nederlandse Lijst, omdat dit taxon nu als aparte soort wordt beschouwd (*Sylvia subalpina*); (5) twee soorten worden monotypisch, omdat ondersoorten die niet in Nederland zijn vastgesteld, nu als aparte soorten worden beschouwd (*Tarsiger cyanurus*, *Oenanthe pleschanka*).

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