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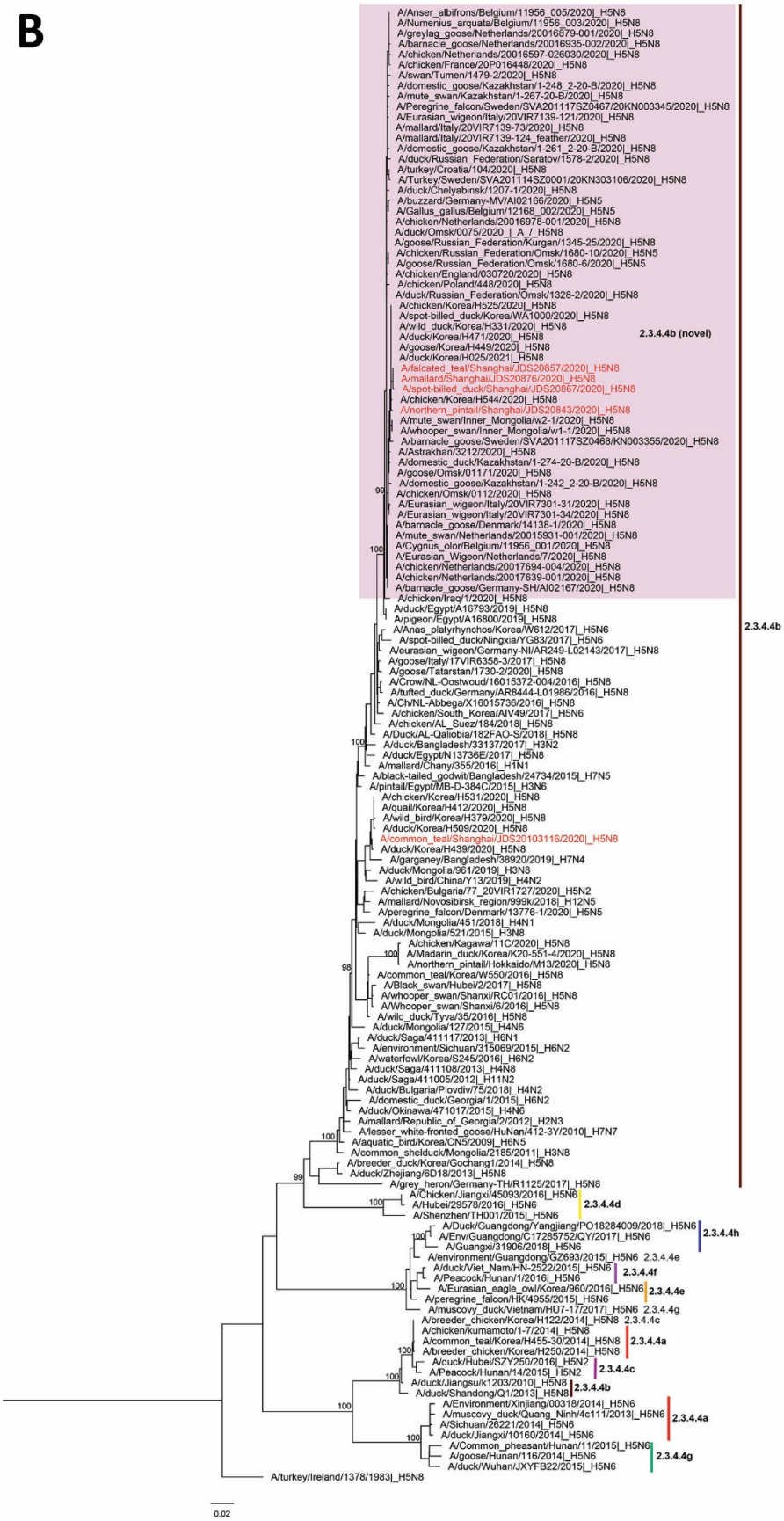
Genetically Divergent Highly Pathogenic Avian Influenza A(H5N8) Viruses in Wild Birds, Eastern China

Appendix.

A

B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A/mute_swan/Kazakhstan/1-267-20-B/2020|_H5N8
A/Peregrine_falcon/Sweden/SVA201117SZ0467/20KN003345/2020|_H5N8
A/Eurasian_wigeon/Italy/20VIR7139-121/2020|_H5N8
A/mallard/Italy/20VIR7139-73/2020|_H5N8
A/mallard/Italy/20VIR7139-124_feather/2020|_H5N8
A/domestic_goose/Kazakhstan/1-261_2-20-B/2020|_H5N8
A/duck/Russian_Federation/Saratov/1578-2/2020|_H5N8
A/turkey/Croatia/104/2020|_H5N8
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A/Guangxi/31906/2018|_H5N6
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A/Peacock/Hunan/1/2016|_H5N6
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2.3.4.4e
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A/muscovy_duck/Vietnam/HU7-17/2017|_H5N6 2.3.4.4g
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C

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A/falcated_teal/Shanghai/JDS20857/2020|_H5N8
A/spot-billed_duck/Shanghai/JDS20867/2020|_H5N8
A/mallard/Shanghai/JDS20876/2020|_H5N8
A/chicken/Iraq/1/2020|_H5N8
2.3.4.4b （novel）
A/pigeon/Egypt/A16800/2019|_H5N8
A/duck/Egypt/A16793/2019|_H5N8
A/goose/Tatarstan/1730-2/2020|_H5N8
A/chicken/Sergiyev_Posad/39/2017|_H5N8
A/tufted_duck/Germany/AR8444-L01986/2016|_H5N8
A/eurasian_wigeon/Germany-NI/AR249-L02143/2017|_H5N8
A/Ch/NL-Abbega/X16015736/2016|_H5N8
A/spot-billed_duck/Ningxia/YG93/2017|_H5N6
A/White-fronted_Goose/Ukraine/AN-116-28-02/2013|_H9N2
A/bean_goose/Hubei/SZY200/2016|_H11N9
A/Anas_platythynchos/Belgium/11026_11/2017|_H11N9
A/common_redshank/Singapore/F83-1/2015|_H9N5
A/duck/Mongolia/122/2015|_H3N3
A/teal/Egypt/MB-D-125OP/2015|_H7N3
A/duck/Hokkaido/OBF2/2018|_H3N2
A/duck/Mongolia/124/2015|_H3N2
A/duck/Mongolia/210/2018|_H3N8
A/mallard/Dalian/DZ-137/2013|_H13N6
A/mallard/Beijing/21-MA/2011|_H4N6
A/duck/Mongolia/179/2015|_H3N8
A/chicken/Korea/H531/2020|_H5N8
A/duck/Korea/H509/2020|_H5N8
A/wild_bird/Korea/H379/2020|_H5N8
A/quail/Korea/H412/2020|_H5N8
A/wild_bird/Jiangxi/P419/2016|_H6N8
A/wild_goose/Dongting/C1037/2011|_H12N8
A/duck/Mongolia/961/2019|_H3N8
A/duck/Mongolia/575/2018|_H3N1
A/shelduck/Ukraine/KT-8-2-11/2016|_H1N2
A/teal/Egypt/MB-D-148OP/2015|_H10N7
A/Crow/NL-Oostwoud/16015372-004/2016|_H5N8
A/duck/Bangladesh/26918/2015|_H3N6
A/Eurasian_coot/Shanghai/PD112440/2016|_H11N9
A/mallard_duck/Netherlands/10/2012|_H6NT
A/common_teal/Shanghai/NH110165/2018|_H12N2
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A/domestic_duck/Poland/237/2020|_H5N8
A/domestic_duck/Poland/229/2020|_H5N8
A/domestic_duck/Poland/230/2020|_H5N8
A/domestic_goose/Poland/274/2020|_H5N8
A/domestic_duck/Poland/222/2020|_H5N8
A/domestic_duck/Poland/223/2020|_H5N8
A/domestic_duck/Poland/263/2020|_H5N8
A/domestic_duck/Poland/219/2020|_H5N8
A/domestic_duck/Poland/285/2020|_H5N8
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A/chicken/Poland/003/2020|_H5N8
A/turkey/Poland/23/2019|_H5N8
A/hawk/Poland/003/2020|_H5N8
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A/domestic_goose/Poland/028/2020|_H5N8
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A/common_teal/Korea/W550/2016|_H5N8
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A/Whooper_swan/Shanxi/6/2016|_H5N8
A/Black_swan/Hubei/2/2017|_H5N8
A/wild_duck/Tyva/35/2016|_H5N8
A/white_stork/Germany-TH/R1149/2017|_H5N8
A/grey_heron/Germany-THR1125/2017|_H5N8
A/northern_shoveler/Georgia/1/2010|_H2N3
A/mallard_duck/Netherlands/2/2013|_H3N6
2.3.4.4b
A/environment/Guangdong/GZ693/2015|_H5N6 2.3.4.4e
A/muscovy_duck/Vietnam/HU7-17/2017|_H5N6 2.3.4.4g
A/Eurasian_eagle_owl/Korea/960/2016|_H5N6 2.3.4.4e
A/Duck/Guangdong/Yangjiang/PO18284009/2018|_H5N6
A/Env/Guangdong/C17285752/QY/2017|_H5N6
A/Guangxi/31906/2018|_H5N6
2.3.4.4h
A/duck/Viet_Nam/HN-2522/2015|_H5N6
A/Peacock/Hunan/1/2016|_H5N6
2.3.4.4f
A/Common_pheasant/Hunan/11/2015|_H5N6 2.3.4.4g
A/peregrine_falcon/HK/4955/2015|_H5N8 2.3.4.4e
A/Sichuan/26221/2014|_H5N6
A/Environment/Xinjiang/00318/2014|_H5N6
A/duck/Jiangxi/10160/2014|_H5N6
A/muscovy_duck/Quang_Ninh/4c111/2013|_H5N6
2.3.4.4a
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A/duck/Wuhan/JXYFB22/2015|_H5N6
2.3.4.4g
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A/common_teal/Korea/H455-30/2014|_H5N8
A/breeder_chicken/Korea/H250/2014|_H5N8
2.3.4.4a
A/breeder_chicken/Korea/H122/2014|_H5N8 2.3.4.4c
A/breeder_duck/Korea/Gochang1/2014|_H5N8
A/duck/Zhejiang/6D18/2013|_H5N8
A/duck/Shandong/Q1/2013|_H5N8
A/duck/Jiangsu/k1203/2010|_H5N8
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A/duck/Hubei/SZY250/2016|_H5N2
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2.3.4.4c
A/Shenzhen/TH001/2015|_H5N6_
A/Hubei/29578/2016|_H5N6
A/Chicken/Jiangxi/45093/2016|_H5N6
2.3.4.4d
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E

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A/chicken/Netherlands/20017694-004/2020|_H5N8
A/goose/Russian_Federation/Kurgan/1345-25/2020|_H5N8
A/chicken/England/030720/2020|_H5N8
A/chicken/Netherlands/20016978-001/2020|_H5N8
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A/swan/Tumen/1479-2/2020|_H5N8
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A/chicken/Russian_Federation/Omsk/1680-10/2020|_H5N5
A/duck/Chelyabinsk/1207-1/2020|_H5N8
A/turkey/Croatia/104/2020|_H5N8
A/mute_swan/Kazakhstan/1-267-20-B/2020|_H5N8
A/duck/Russian_Federation/Omsk/1328-2/2020|_H5N8
A/domestic_goose/Kazakhstan/1-248_2-20-B/2020|_H5N8
A/mallard/Kagoshima/KU-d89/2021|_H5N8
A/White_peacock/Korea/H533/2020|_H5N8
A/chicken/Korea/H022/2021|_H5N8
A/duck/Korea/H025/2021|_H5N8
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A/chicken/Korea/H544/2020|_H5N8
A/spot-billed_duck/Korea/WA1000/2020|_H5N8
A/wild_duck/Korea/H331/2020|_H5N8
A/northern_pintail/Shanghai/JDS20843/2020|_H5N8
A/falcated_teal/Shanghai/JDS20857/2020|_H5N8
A/mallard/Shanghai/JDS20876/2020|_H5N8
A/spot-billed_duck/Shanghai/JDS20867/2020|_H5N8
A/whooper_swan/Inner_Mongolia/w1-1/2020|_H5N8
A/mute_swan/Inner_Mongolia/w2-1/2020|_H5N8
A/turkey/Omsk/0003/2020|_H5N8
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A/domestic_goose/Kazakhstan/1-242_2-20-B/2020|_H5N8
A/chicken/Omsk/0112/2020|_H5N8
A/goose/Omsk/0113/2020|_H5N8
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A/Astrakhan/3212/2020|_H5N8
A/Numenius_arquata/Belgium/11956_003/2020|_H5N8
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A/chicken/Netherlands/20016597-026030/2020|_H5N8
A/greylag_goose/Netherlands/20016879-001/2020|_H5N8
A/Anser_albifrons/Belgium/11956_005/2020|_H5N8
A/Gallus_gallus/Belgium/12168_002/2020|_H5N5
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A/chicken/Iraq/1/2020|_H5N8
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A/chicken/Germany-MV/R8790/2016|_H5N8
A/eurasian_wigeon/Germany-NI/AR249-L02143/2017|_H5N8
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A/duck/Bangladesh/35669/2018|_H3N8
A/chicken/Egypt/Q13804A/2017|_H5N8
A/chicken/Korea/H531/2020|_H5N8
A/duck/Korea/H509/2020|_H5N8
A/quail/Korea/H412/2020|_H5N8
A/wild_bird/Korea/H379/2020|_H5N8
A/duck/Korea/H439/2020|_H5N8
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A/wild_bird/China/Y13/2019|_H4N2
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A/duck/Mongolia/447/2018|_H4N6
A/duck/Bangladesh/36391/2018|_H4N6
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A/wild_bird/Uganda/MUWRP-731/2017|_H6N2
A/Anas_Platyrhynchos/Belgium/10811_6/2019|_H5N6
A/chicken/Kagawa/11C/2020|_H5N8
A/northern_pintail/Hokkaido/M13/2020|_H5N8
A/Madarin_duck/Korea/K20-551-4/2020|_H5N8
A/layer_hen/Slovakia/A-chicken-Slovakia-Pah_14/2020|_H5N8
A/duck/Mongolia/451/2018|_H4N1
A/teal/Chany/324/2017|_H12N5
A/duck/Mongolia/961/2019|_H3N8
A/mallard/Tottori/31C/2019|_H7N7
A/mallard/Bangladesh/37909/2019|_H8N4
A/garganey/Bangladesh/38920/2019|_H7N4
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A/Anas_platyrhynchos/Belgium/7921-H188508/2016|_H4N6
A/Anas_platyrhynchos/Belgium/3950-8/2015|_H3N8
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A/Whooper_swan/Shanxi/6/2016|_H5N8
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A/Guangxi/31906/2018|_H5N6
A/environment/Guangdong/GZ693/2015|_H5N6
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A/Eurasian_eagle_owl/Korea/960/2016|_H5N6
A/muscovy_duck/Vietnam/HU7-17/2017|_H5N6 2.3.4.4g
A/duck/Viet_Nam/HN-2522/2015|_H5N6
2.3.4.4f
A/Peacock/Hunan/1/2016|_H5N6
A/peregrine_falcon/HK/4955/2015|_H5N6 2.3.4.4e
A/Common_pheasant/Hunan/11/2015|_H5N6
A/duck/Wuhan/JXYFB22/2015|_H5N6
2.3.4.4g
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A/Sichuan/26221/2014|_H5N6
A/Environment/Xinjiang/00318/2014|_H5N6
A/duck/Jiangxi/10160/2014|_H5N6
2.3.4.4a
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A/Shenzhen/TH001/2015_I_H5N6
A/Chicken/Jiangxi/45093/2016|_H5N6
2.3.4.4d
A/Hubei/29578/2016|_H5N6
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A/breeder_chicken/Korea/H122/2014|_H5N8
A/chicken/kumamoto/1-7/2014|_H5N8
A/common_teal/Korea/H455-30/2014|_H5N8
2.3.4.4a&c
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A/Peacock/Hunan/14/2015|_H5N2
A/breeder_duck/Korea/Gochang1/2014|_H5N8
A/duck/Zhejiang/6D18/2013|_H5N8
A/duck/Shandong/Q1/2013|_H5N8
2.3.4.4b
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A/turkey/Ireland/1378/1983|_H5N8
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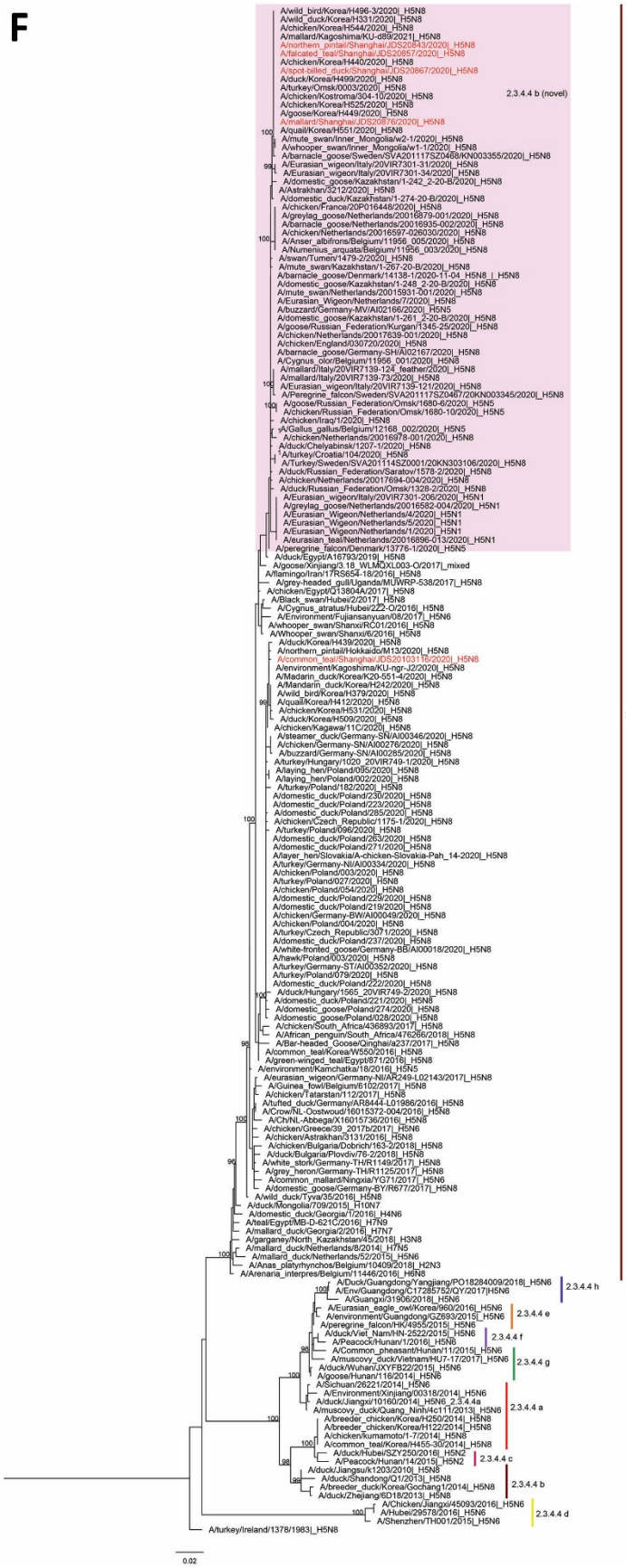
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A/goose/Korea/H449/2020|_H5N8
A/mallard/Shanghai/JDS20876/2020|_H5N8
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A/Astrakhan/3212/2020|_H5N8
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A/Eurasian_Wigeon/Netherlands/7/2020|_H5N8
A/buzzard/Germany-MV//AI02166/2020|_H5N5
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A/chicken/Egypt/Q13804A/2017|_H5N8
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A/wild_bird/Korea/H379/2020|_H5N8
A/quail/Korea/H412/2020|_H5N8
A/chicken/Korea/H531/2020|_H5N8
A/duck/Korea/H509/2020|_H5N8
2.3.4.4 b
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A/steamer_duck/Germany-SN/AI00346/2020|_H5N8
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A/buzzard/Germany-SN/AI00285/2020|_H5N8
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A/laying_hen/Poland/002/2020|_H5N8
A/turkey/Poland/182/2020|_H5N8
A/domestic_duck/Poland/230/2020|_H5N8
A/domestic_duck/Poland/223/2020|_H5N8
A/domestic_duck/Poland/285/2020|_H5N8
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A/turkey/Poland/096/2020|_H5N8
A/domestic_duck/Poland/263/2020|_H5N8
A/domestic_duck/Poland/271/2020|_H5N8
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A/turkey/Germany-NI/AI00334/2020|_H5N8
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A/chicken/Poland/004/2020|_H5N8
A/turkey/Czech_Republic/3071/2020|_H5N8
A/domestic_duck/Poland/237/2020|_H5N8
A/white-fronted_goose/Germany-BB/AI00018/2020|_H5N8
A/hawk/Poland/003/2020|_H5N8
A/turkey/Germany-ST/AI00352/2020|_H5N8
A/turkey/Poland/079/2020|_H5N8
A/domestic_duck/Poland/222/2020|_H5N8
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A/green-winged_teal/Egypt/871/2018|_H5N8
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A/Guinea_fowl/Belgium/6102/2017|_H5N8
A/chicken/Tatarstan/1/12/2017|_H5N8
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A/Ch/NL-Abbega/X16015736/2016|_H5N8
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A/chicken/Astrakhan/3131/2016|_H5N8
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A/duck/Bulgaria/Plovdiv/76-2/2018|_H5N8
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A/grey_heron/Germany-TH/R1125/2017|_H5N8
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A/domestic_goose/Germany-BY/R677/2017|_H5N8
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A/duck/Mongolia/709/2015|_H10N7
A/domestic_duck/Georgia/1/2016|_H4N6
A/teal/Egypt/MB-D-621C/2016|_H7N9
A/mallard_duck/Georgia/2/2016|_H7N7
A/garganey/North_Kazakhstan/45/2018|_H3N8
A/mallard_duck/Netherlands/8/2014|_H7N5
A/mallard_duck/Netherlands/52/2015|_H5N6
A/Anas_platyrhynchos/Belgium/10409/2018|_H2N3
A/Arenaria_interpres/Belgium/11446/2016|_H6N8
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2.3.4.4 h
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A/Guangxi/31906/2018|_H5N8
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A/environment/Guangdong/GZ893/2015|_H5N6
2.3.4.4 e
A/peregrine_falcon/HK/4955/2015|_H5N6
A/duck/Viet_Nam/HN-2522/2015|_H5N6
2.3.4.4 f
A/Peacock/Hunan/1/2016|_H5N6
A/Common_pheasant/Hunan/11/2015|_H5N6
A/muscovy_duck/Vietnam/HU7-17/2017|_H5N6
2.3.4.4 g
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A/goose/Hunan/116/2014|_H5N6
A/Sichuan/26221/2014|_H5N6
A/Environment/Xinjiang/00318/2014|_H5N6
A/duck/Jiangxi/10160/2014|_H5N6_2.3.4.4a
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2.3.4.4 a
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A/breeder_chicken/Korea/H122/2014|_H5N8
A/chicken/Kumamoto/1-7/2014|_H5N8
A/common_teal/Korea/H455-30/2014|_H5N8
A/duck/Hubei/SZY250/2016|_H5N2
A/Peacock/Hunan/14/2015|_H5N2
2.3.4.4 c
A/duck/Jiangsu/k1203/2010|_H5N8
A/duck/Shandong/Q1/2013|_H5N8
A/breeder_duck/Korea/Gochang1/2014|_H5N8
A/duck/Zhejiang/6D18/2013|_H5N8
2.3.4.4 b
A/Chicken/Jiangxi/45093/2016|_H5N6
A/Hubei/29579/2016|_H5N6
A/Shenzhen/TH001/2015|_H5N6
2.3.4.4 d
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0.02

G

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A/Greylag_goose/England/033100/2020|_H5N8
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A/whooper_swan/Inner_Mongolia/w1-1/2020|_H5N8
A/turkey/Omsk/0003/2020|_H5N8
A/falcated_teal/Shanghai/JDS20857/2020|_H5N8
A/spot-billed_duck/Shanghai/JDS20867/2020|_H5N8
A/mallard/Shanghai/JDS20876/2020|_H5N8
A/northern_pintail/Shanghai/JDS20843/2020|_H5N8
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A/barnacle_goose/Netherlands/20016935-002/2020|_H5N8
A/chicken/France/20P016448/2020|_H5N8
A/chicken/Netherlands/20016597-026030/2020|_H5N8
A/greylag_goose/Netherlands/20016879-001/2020|_H5N8
A/Anser_albifrons/Belgium/11956_005/2020|_H5N8
A/Numenius_arquata/Belgium/11956_003/2020|_H5N8
A/chicken/England/030720/2020|_H5N8
A/chicken/Poland/448/2020|_H5N8
A/goose/Russian_Federation/Kurgan/1345-25/2020|_H5N8
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A/Eurasian_wigeon/Italy/20VIR7139-121/2020|_H5N8
A/goose/Omsk/30009/2020|_H5N8
A/turkey/Croatia/104/2020|_H5N8
A/mute_swan/Kazakhstan/1-267-20-B/2020|_H5N8
A/mallard/Italy/20VIR7139-73/2020|_H5N8
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A/domestic_goose/Kazakhstan/1-261_2-20-B/2020|_H5N8
A/Turkey/Sweden/SVA201114SZ0001/20KN303106/2020|_H5N8
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A/swan/Tumen/1479-2/2020|_H5N8
A/duck/Russian_Federation/Omsk/1328-2/2020|_H5N8
A/chicken/Netherlands/20016978-001/2020|_H5N8
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A/goose/Russian_Federation/Omsk/1680-6/2020|_H5N5
A/duck/Russian_Federation/Saratov/1578-2/2020|_H5N8
A/buzzard/Germany-MV/AI02166/2020|_H5N5
A/Gallus_gallus/Belgium/12168_002/2020|_H5N5
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A/chicken/Netherlands/20017694-004/2020|_H5N8
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A/domestic_goose/Kazakhstan/1-242_2-20-B/2020|_H5N8
A/domestic_duck/Kazakhstan/1-274-20-B/2020|_H5N8
A/Eurasian_wigeon/Italy/20VIR7301-31/2020|_H5N8
A/Eurasian_wigeon/Italy/20VIR7301-34/2020|_H5N8
A/Astrakhan/3212/2020|_H5N8
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A/chicken/EL-WadiAlgidid/185/2018|_H5N8
A/chicken/Luxor/186FL/2018|_H5N8
A/chicken/Voronezh/1504/2018|_H5N8
A/Cygnus_olor/Belgium/2967/2017|_H5N8
A/grey_heron/Germany-TH/R1125/2017|_H5N8
A/Brahma_chicken/Belgium/6153/2017|_H5N8
A/eurasian_wigeon/Germany-NI/AR249-L02143/2017|_H5N8
A/gadwall/Ningxia/YG61/2017|_H5N6
A/jungle_crow/Hyogo/2803A002/2018|_H5N6
A/Buteo_buteo/Belgium/3022/2017|_H5N8
A/white_stork/Germany-TH/R1149/2017|_H5N8
A/Crow/NL-Oostwoud/16015372-004/2016|_H5N8
A/tufted_duck/Germany/AR8444-L01986/2016|_H5N8
2.3.4.4b
A/Ch/NL-Abbega/X16015736/2016|_H5N8
A/goose/Tatarstan/1730-2/2020|_H5N8
A/mute_swan/Krasnodar/25/2017|_H5N8
A/duck/Xinjiang/10.29_WLMQXL001-C/2017|_mixed
A/duck/Xinjiang/4.21_WLMQXL005-O/2017|_mixed
A/Sandwich_tern/South_Africa/18010369/2018|_H5N8
A/turkey/South_Africa/450199/2017|_H5N8
A/chicken/South_Africa/443397/2017|_H5N8
A/common_teal/Korea/W550/2016|_H5N8
A/duck/Saudi_Arabia/KFU-HKU3616_2017/2017|_H5N8
A/domestic_duck/Siberia/49_feather/2016|_H5N8
A/chicken/Bangladesh/1896-17-NS/2017|_H5N6
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A/buzzard/Germany-SN/AI00285/2020|_H5N8
A/steamer_duck/Germany-SN/AI00346/2020|_H5N8
A/chicken/Germany-SN/AI00276/2020|_H5N8
A/laying_hen/Poland/002/2020|_H5N8
A/laying_hen/Poland/095/2020|_H5N8
A/chicken/Poland/004/2020|_H5N8
A/turkey/Germany-NI/AI00334/2020|_H5N8
A/chicken/Poland/054/2020|_H5N8
A/turkey/Poland/096/2020|_H5N8
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A/Mandarin_duck/Korea/H242/2020|_H5N8
A/chicken/Kagawa/11C/2020|_H5N8
A/environment/Kagoshima/KU-ngr-J2/2020_H5N8_|_H5N8
A/Madarin_duck/Korea/K20-551-4/2020|_H5N8
A/northern_pintail/Hokkaido/M13/2020|_H5N8
A/domestic_duck/Poland/221/2020|_H5N8
A/domestic_duck/Poland/285/2020|_H5N8
A/domestic_duck/Poland/223/2020|_H5N8
A/domestic_duck/Poland/230/2020|_H5N8
A/domestic_duck/Poland/271/2020|_H5N8
A/domestic_duck/Poland/237/2020|_H5N8
A/domestic_duck/Poland/263/2020|_H5N8
A/domestic_goose/Poland/028/2020|_H5N8
A/white-fronted_goose/Germany-BB/AI00018/2020|_H5N8
A/domestic_duck/Poland/222/2020|_H5N8
A/domestic_duck/Poland/219/2020|_H5N8
A/turkey/Poland/182/2020|_H5N8
A/domestic_goose/Poland/274/2020|_H5N8
A/layer_hen/Slovakia/A-chicken-Slovakia-Pah_14/2020|_H5N8
A/hawk/Poland/003/2020|_H5N8
A/turkey/Poland/23/2019|_H5N8
A/turkey/Hungary/1020_20VIR749-1/2020|_H5N8
A/chicken/Poland/003/2020|_H5N8
A/turkey/Germany-ST/AI00352/2020|_H5N8
A/turkey/Czech_Republic/3071/2020|_H5N8
A/duck/Hungary/1565_20VIR749-2/2020|_H5N8
A/domestic_duck/Poland/229/2020|_H5N8
A/guinea_fowl/Nigeria/OG-GF11T_19VIR8424-7/2019_H5N8|_H5N8
A/quail/South_Africa/AI5930/2018|_H5N8
A/Whooper_Swan/Sanmenxia/01/2016|_H5N8
A/whooper_swan/Shanxi/RC01/2016|_H5N8
A/Whooper_swan/Shanxi/6/2016|_H5N8
A/Black_swan/Hubei/2/2017|_H5N8
A/duck/Egypt/N13736E/2017|_H5N8
A/grey_heron/Germany-SN/R572/2017|_H5N5
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A/wild_duck/Tyva/35/2016|_H5N8
A/duck/Eastern_China/S1109/2014|_H5N8
A/duck/Zhejiang/W24/2013|_H5N8
A/Von_Schrencks_bittern/Jiangxi/Y9/2014|_H5N8
A/breeder_duck/Korea/Gochang1/2014|_H5N8
A/duck/Zhejiang/6D18/2013|_H5N8_2.3.4.4b
A/Duck/Guangdong/Yangjiang/PO18284009/2018|_H5N6
2.3.4.4h
A/Env/Guangdong/C17285752/QY/2017|_H5N6
A/Guangxi/31908/2018|_H5N6
A/environment/Guangdong/G2693/2015|_H5N6
A/duck/Wuhan/JXYFB22/2015|_H5N6_2.3.4.4g
A/duck/Viet_Nam/HN-2522/2015|_H5N6
2.3.4.4e&f
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A/peregrine_falcon/HK/4955/2015|_H5N6
A/Eurasian_eagle_owl/Korea/960/2016|_H5N6
A/muscovy_duck/Vietnam/HU7-17/2017|_H5N6
A/Common_pheasant/Hunan/1/2015|_H5N6
2.3.4.4g
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A/Sichuan/26221/2014|_H5N6
A/duck/Jiangxi/10160/2014|_H5N6
A/Environment/Xinjiang/00318/2014|_H5N6
2.3.4.4a
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A/duck/Jiangsu/k1203/2010|_H5N6
2.3.4.4b
A/duck/Shandong/Q1/2013|_H5N8
A/breeder_chicken/Korea/H250/2014|_H5N8
A/common_teal/Korea/H455-30/2014|_H5N8
A/breeder_chicken/Korea/H122/2014|_H5N8
2.3.4.4a&c
A/chicken/kumamoto/1-7/2014|_H5N8
A/duck/Hubei/SZY250/2016|_H5N2
A/Peacock/Hunan/14/2015|_H5N2
A/Chicken/Jiangxi/45093/2016|_H5N6
A/Hubei/29578/2016|_H5N6
2.3.4.4d
A/Shenzhen/TH001/2015|_H5N6
A/turkey/Ireland/1378/1983|_H5N8
0.03

Appendix Figure. Phylogenetic trees of highly pathogenic avian influenza A(H5N8) isolated in Shanghai, China during 2020 (red text), and reference sequences in GISAID (https://www.gisaid.org). Tree was based on 7 gene segments; it was constructed using IQ-TREE (*1*) with 1,000 bootstrap replicates. Labels indicate subclades 2.3.4.4a–h. Pink shading indicates novel genotypes of clade 2.3.4.4b. Numbers to the left of node indicate bootstrap values. Scale bars indicate average number of nucleotide substitutions per site.

Reference

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