



Table S1. H5 HPAI viruses analysed for phylogenetic analysis, viral sequences were submitted to GISAID EpiFlu Database

Virus	H5 HPAI Subtype clade 2.3.4.4b	Data collection	Region	Province	Location	Accession Number
A/Eurasian_wigeon/Italy/20VIR7139-121/2020	H5N8	2020-11-14	Veneto	Rovigo	Valle Ca' Zuliani	EPI1815147- EPI1815154
A/mallard/Italy/20VIR7139-124_feather/2020	H5N8	2020-11-14	Veneto	Rovigo	Valle Ca' Zuliani	EPI1815156-EPI1815163
A/mallard/Italy/20VIR7139-73/2020	H5N8	2020-11-14	Veneto	Rovigo	Valle Ca' Zuliani	EPI1814603- EPI1814610
A/common_buzzard/Italy/21VIR431-7/2020	H5N8	2020-11-17	Puglia	Lecce	Lecce	EPI1858349-EPI1858356
A/Eurasian_wigeon/Italy/20VIR7301-362/2020	H5N8	2020-11-21	Veneto	Venezia	Valle Drago - Jesolo	EPI1843643- EPI1843650
A/Eurasian_wigeon/Italy/20VIR7301-206/2020	H5N1	2020-11-21	Veneto	Venezia	Valle Drago - Jesolo	EPI1815139-EPI1815146
A/Eurasian_wigeon/Italy/20VIR7301-31/2020	H5N8	2020-11-21	Veneto	Venezia	Valle Drago - Jesolo	EPI1815378-EPI1815385
A/Eurasian_wigeon/Italy/20VIR7301-34/2020	H5N8	2020-11-21	Veneto	Venezia	Valle Drago - Jesolo	EPI1815371-EPI1815377
A/greater_white-fronted_goose/Italy/20VIR8073-4/2020	H5N1	2020-11-23	FVG	Gorizia	Monfalcone	EPI1843635- EPI1843642
A/common_teal/Italy/20VIR7439-191/2020	H5N8	2020-11-28	Veneto	Rovigo	Valle Chiusa	EPI1858205- EPI1858212
A/common_teal/Italy/20VIR7439-190/2020	H5N5	2020-11-28	Veneto	Rovigo	Valle Chiusa	EPI1843619- EPI1843626

Tab.S1 (cont.)						
A/greylag_goose/Italy/20VIR7660-6/2020	H5N8	2020-11-29	Veneto	Venezia	Jesolo	EPI1843627- EPI1843634
A/common_teal/Italy/20VIR7608-73/2020	H5N8	2020-12-04	Veneto	Venezia	Valle Figheri	EPI1843611- EPI1843618
A/ornamental_grey_crowned_crane/Italy/21VIR436/2021	H5N8	2021-01-19	Emilia Romagna	Ravenna	Lugo	na
A/seagull/Italy/21VIR2479/2021	H5N8	2021-01-28	Emilia Romagna	Rimini	Spiaggia Viserba	EPI1860048- EPI1860055
A/chicken/Italy/21VIR1151-2/2021	H5N8	2021-02-17	FVG	Pordenone	Chions	EPI1858173- EPI1858180
A/duck/Italy/21VIR1293-15/2021	H5N8	2021-02-23	Veneto	Padova	San Giorgio delle Pertiche	EPI1858213- EPI1858220
A/guinea_fowl/Italy/21VIR1293-20/2021	H5N8	2021-02-23	Veneto	Padova	San Giorgio delle Pertiche	EPI1858229- EPI1858236
A/chicken/Italy/21VIR1293-9/2021	H5N8	2021-02-23	Veneto	Padova	San Giorgio delle Pertiche	EPI1858181- EPI1858188

bold viral strains isolated in migratory birds during active surveillance activities

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