

Table S1. HA titers of H6N2 virus isolated from different dilutions of freshwater (FS) and salty water (SS) sediment samples.

Supplementary Materials

Dilutions (EID ₅₀ /ml)	FS (Before PEG precipitation)					FS (After PEG precipitation)					SS (Before PEG precipitation)					SS (After PEG precipitation)				
	E1	E2	E3	E4	E5	E1	E2	E3	E4	E5	E1	E2	E3	E4	E5	E1	E2	E3	E4	E5
10 ⁻¹ (10 ^{-5.5})	128	64	128	256	64	32	64	256	256	256	32	64	64	64	256	64	16	64	128	128
10 ⁻² (10 ^{-4.5})	64	32	256	512	128	32	32	256	512	256	4	32	64	64	256	64	16	64	128	128
10 ⁻³ (10 ^{-3.5})	0	0	0	0	0	64	64	256	256	512	0	0	0	0	0	0	0	0	0	0
10 ⁻⁴ (10 ^{-2.5})	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10 ⁻⁵ (10 ^{-1.5})	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Note: HA titers were given in terms of HA unit

Table S2. Elemental compositions of sediment samples.

Symbol	Element Name	FS (Conc. %)	Abs. Error %^a	SS (Conc. %)	Abs. Error %^a	Fold Change^b
Na	Sodium	2,08	0,25	1,51	0,23	0,46
Mg	Magnesium	1,266	0,026	1,827	0,025	-0,53*
Al	Aluminum	5,065	0,017	9,301	0,021	-0,88*
Si	Silicon	12,85	0,02	26,04	0,03	-1,02**
P	Phosphorus	0,1462	0,0012	0,2032	0,0013	-0,47
S	Sulfur	0,02156	0,00019	0,03796	0,00023	-0,82*
Cl	Chlorine	0,01222	0,00021	0,05079	0,00030	-2,06***
K	Potassium	1,105	0,010	2,646	0,014	-1,26**
Ca	Calcium	36,83	0,05	7,297	0,018	2,34***
Ti	Titanium	0,31	0,0031	0,6344	0,0039	-1,03**
V	Vanadium	<0,00051	0	<0,00051	0	N/A
Cr	Chromium	<0,00051	0	0,0244	0,0016	N/A
Mn	Manganese	0,0579	0,0061	0,0677	0,0029	-0,23
Fe	Iron	2,6	0,011	4,222	0,011	-0,70*
Co	Cobalt	<0,00030	0	<0,00030	0	N/A
Ni	Nickel	<0,00020	0	0,01275	0,00047	N/A
Cu	Copper	0,1184	0,0025	0,0668	0,0016	0,83*
Zn	Zinc	0,00010	0	<0,00010	0	N/A
Ge	Germanium	<0,00010	0	0,00473	0,00034	N/A

As	Arsenic	<0,00010	0	<0,00081	0,00067	N/A
Se	Selenium	0,00342	0,00033	0,00223	0,00021	0,62*
Br	Bromine	0,00039	0,00033	<0,00010	0	N/A
Sr	Strontium	0,07968	0,00074	0,08719	0,00059	-0,13
Y	Yttrium	0,00221	0,00014	0,00625	0,00020	-1,50**
Zr	Zirconium	<0,051	0,033	<0,051	0,05	N/A
Nb	Niobium	0,00222	0	0,00254	0,00021	-0,19
Mo	Molybdenum	<0,0010	0	<0,0010	0	N/A
Ag	Silver	<0,00051	0	0,00104	0,00044	N/A
Cd	Cadmium	<0,00051	0	<0,00051	0	N/A
In	Indium	<0,00051	0	<0,00051	0	N/A
Sn	Tin	<0,00061	0	<0,00061	0	N/A
Sb	Antimony	<0,00061	0	<0,00061	0	N/A
Te	Tellurium	<0,014	0,0061	<0,00071	0	N/A
Ba	Barium	0,155	0,017	0,140	0,016	0,15
La	Lanthanum	<0,0010	0	<0,0010	0	N/A
W	Tungsten	<0,00020	0	<0,00020	0	N/A
Hg	Mercury	<0,00020	0	<0,00020	0	N/A
Tl	Thallium	<0,00020	0	<0,00020	0	N/A
Pb	Lead	<0,00020	0	<0,00020	0	N/A
Bi	Bismuth	<0,00020	0	<0,00020	0	N/A
TOTAL		62,75		54,25		

^aThe error is the statistical error with one sigma confidence interval

^b Fold changes (FC) were given in log₂ base. * = greater than 1.5-fold increase and less than 2-fold increase, ** = between 2-fold and 4-fold increase, *** = greater than 4-fold increase. Negative FC values indicate when the FC value is high in SS.

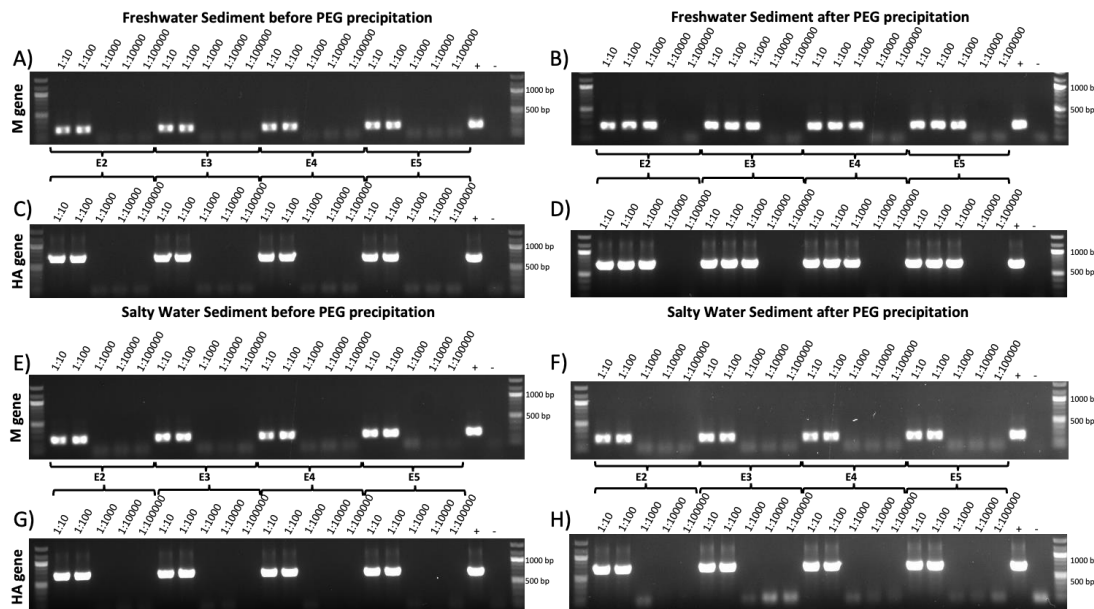


Figure S1. Confirmation of the presence of IAVs in four consecutive passages (E2-to-E5) via molecular methods. Viral genes were detected at 1:100 dilution (4.5 log₁₀ EID₅₀/ml) in FS (A, C) and SS (E, G) before PEG precipitation according to the amplification of the specific region of M (A, E) and HA genes (C, G). PEG precipitation increased the efficiency of detection by 10-fold (1:1000 dilution; 3.5 log₁₀ EID₅₀/ml) for FS (B, D) based on the amplification of partial M (B) and partial HA genes (D). On the other hand, PEG precipitation did not affect the limit of detection based on the amplification of partial M (F) and partial HA (H) genes (1:100 dilution; 4.5 log₁₀ EID₅₀/ml) in SS. The viral RNA of H6N2 virus and nuclease-free water were used as a positive and negative control, respectively.