THE IBIS.

SIXTH SERIES.

No. XII. OCTOBER 1891.

XLI.—*On the Birds of the Lower Yangtse Basin.*—Part II.

By F. W. STYAN, F.Z.S.

[Concluded from p. 359.]

Order MACROCHIRES.

Fam. CYPSELIDÆ.

159. CHÆTURA CAUDACUTA (Lath.).

(114.) One in the Shanghai Museum was killed at Shanghai in October. I have a specimen killed there in the same month and another taken at Wuhu in May.

Fam. CAPRIMULGIDÆ.

160. CAPRIMULGUS JOTAKA, T. & S.

(107.) The spring migration begins at the end of March and continues into May ; they return in September, October, and November.

Order PICI.

Fam. PICIDÆ.

161. IYNX TORQUILLA, L.

(88.) *Yunx japonica*, Bp. ; Swinhoe, P. Z. S. 1871, p. 393.

Not common. Obtained at Kiukiang in May, and again in September and December.

162. *PICUS CABANISI*, Malh.

(73.) *Picus mandarinus*, Gould ; Swinhoe, P. Z. S. 1871, p. 391.

A common species all along the Yangtse Valley, especially on the lower wooded slopes of the mountain-ranges. They are also found on the cultivated plains, and among the mulberry-trees round Kahing are very abundant. In common with other Woodpeckers, they are fond of tallow-trees, in the rough bark of which insects most abound. A pair nested in a willow in my garden at Kiukiang one year, in a hole about 20 feet from the ground ; the young left the nest on 29th May. The old birds were very fearless, and would allow one to approach within a few feet. They picked up a good deal of their food on the grass lawn.

This species has a marked inclination to assume a white rump. In addition to the Foochow specimen, already noted (Ibis, 1887, p. 229), I have seen one shot at Shanghai with a considerable amount of white edging to the rump-feathers, and another with a slight trace of the same.

163. *IYNGIPICUS SCINTILLICEPS* (Swinhoe).

(79.) Fairly plentiful ; mostly found in hilly country. In my series of this species the barring of the outer rectrices varies much : in some it is hardly visible ; in others it is very distinct and dark. The crown of the head also is variable ; in two specimens it is almost black, with only a faint tinge of grey towards the forehead.

164. *GEVINUS GUERINI* (Malh.).

(83.) Common all along the Yangtse Valley.

165. *PICUMNUS CHINENSIS* (Hargitt).

(87.) Not common ; but I have obtained two at Kiu-kiang and one near Kahing.

Order COCCYGES.

Fam. UPUPIDÆ.

166. *UPUPA EOPS*, L.

(126.) Scattered thinly over the country, and met with throughout the year.

Fam. MEROPIDÆ.

167. MEROPS BICOLOR, Bodd.

(118.) Père Heude has specimens obtained on the sand-hills at the mouth of the Poyang Lake below Kiukiang, where he tells me they were breeding; he assures me he has also met with them on the Lushan range.

Fam. CORACIIDÆ.

168. EURYSTOMUS ORIENTALIS (L.).

(119.) *Eurystomus orientalis*, Swinhoe, P. Z. S. 1871, p. 347.

Comes to breed in the Lushan Hills in May. The autumn migration takes place in October, when young birds may sometimes be found in the Shanghai market.

Fam. ALCEDINIDÆ.

169. ALCEDO BENGALENSIS, Briss.

(120.) Very abundant.

170. CERYLE RUDIS (L.).

(124.) Comes to breed in the Yangtse Valley.

171. CERYLE GUTTATA, Vigors.

(125.) *Ceryle lugubris*, Temm.; Swinhoe, P. Z. S. 1871, p. 348.

A scarce bird, found among mountain-streams. I have seen two shot at Maychee, but have only met with it myself among the Chekiang Hills.

172. HALCYON PILEATUS (Bodd.).

(121.) Comes annually to breed in the Yangtse Valley. Young birds leave the nest in July; they resemble the parents, but have a shorter bill, yellow-brown in colour.

173. HALCYON SMYRNENSIS (L.).

(122.) David says this species ranges as far north as Shanghai, and Swinhoe says "Shanghai to Hainan"; but it must be a rare straggler here, and I have never met with it in the district.

174. HALCYON COROMANDUS (Lath.).

(123.) A specimen was caught on Shaweishan, at the mouth of the Yangtse, and is now in the Shanghai Museum.

Fam. CUCULIDÆ.

175. CUCULUS CANORUS, L.

(104.) Arrives in April. Some remain as late as the middle of October. The common Cuckoos at Kiukiang are nearly all of a small pale race, with very narrow bars on the underparts.

176. CUCULUS MICROPTERUS, Gould.

(103.) Not uncommon at Kiukiang in May. I frequently hear a quadrisyllabic note which I believe belongs to this species.

177. CUCULUS STRIATUS, Drap.

(105.) According to David this species is found in summer throughout China.

178. HIEROCOCCYX FUGAX (Horsf.).

(102.) *Cuculus sparveriioides* et *Cuculus hyperythrus*, Swinhoe, P. Z. S. 1871, p. 394.

I examined a pair shot near Shanghai on 21st September, and another pair on 5th October; the male of one and the female of the other are now in the Shanghai Museum. I have also seen another shot near Shanghai. It appears to pass through Hankow in spring, for its note has been accurately described to me as being heard in a certain district there every April.

179. COCCYTES COROMANDUS (L.).

(97.) Two were obtained in the Lushan Hills in June, and one in a garden at Kiukiang on 14th September; another specimen was killed near Hankow.

Order STRIGES.

Fam. BUBONIDÆ.

180. KETUPA FLAVIPES (Hodgs.).

(60.) *Ketupa magnifica*, Swinhoe, Ibis, 1873, p. 127.

I met with a pair in March, among some fine old decayed

trees, in the Chien San range behind Ngankin. The male was shot, but his mate escaped, after a long chase. A friend in Shanghai has a live one—locality unknown—which he feeds entirely on meat; it perches with the outer toe reversed.

181. *BUBO IGNAVUS* (Forster).

(58.) *Bubo maximus*, Swinhoe, P. Z. S. 1871, p. 343.

Not uncommon among the hills that border the Yangtse. In the summer young birds are brought down alive by the woodcutters, and every winter one or two are shot by sportsmen.

182. *BUBO COROMANDUS* (Lath.).

(59.) A single immature specimen was obtained near Shanghai by Père Heude.

183. *SCOPS GLABRIPES*, Swinhoe.

(64.) I have obtained examples of this species at Kiukiang and Chinteh, lower down the river, and have heard it (or a species with an exactly similar note) calling at Kahing. At Kiukiang I obtained young fully fledged, but still in down, from the Lushan Hills on 6th July.

184. *SCOPS SEMITORQUES*, T. & S.

(65.) I have examined specimens of this Japanese Owl from Hankow, Chinkiang, and Ningpo.

185. *SCOPS STICTONOTUS*, Sharpe.

(63.) *Scops sunia*, Hodgs.; Swinhoe, P. Z. S. 1871, p. 343.

Obtained at Kiukiang in April, Shanghai in October, and on Gutzlaff Island, at the mouth of the Yangtse, in November (migrating).

186. *GLAUCIDIUM WHITELYI* (Blyth).

(55.) A very common bird throughout the Yangtse Valley, both on the hills and plains. Young birds fully fledged are about by the middle of May.

In habits they are more or less diurnal. Their long gurgling call can often be heard during the daytime, and I have shot one in the act of devouring a young chicken just killed; another had the whole leg of a chicken in its

gizzard. When disturbed they seldom fly far, but glide from one tree to another with a long sweep, without any apparent motion of the wings.

187. *GLAUCIDIUM BRODIEI* (Burt).

(56.) David mentions one killed at Nankin.

188. *NINOX SCUTULATA* (Raffl.).

(53.) *Ninox japonica*, T. & S.; Swinhoe, P. Z. S. 1871, p. 343.

Obtained at Kiukiang in April and May, but not common; also once near Shanghai in May.

189. *ASIO OTUS* (L.).

(61.) *O. vulgaris*, Flem.; Swinhoe, P. Z. S. 1871, p. 344.

Common in places near Shanghai in April and November on migration. Probably a few remain here all winter, as I have seen one shot in January.

190. *ASIO ACCIPITRINUS* (Pall.).

(62.) *O. brachyotus* (L.); Swinhoe, P. Z. S. 1871, p. 344.

Fairly common all winter, its numbers being largely increased in spring and autumn. On a certain grassy slope of the Feng Wan Hills near Shanghai, or among the adjacent bamboos, one or two can be found any time in winter, while in the migratory season twenty or thirty can be flushed there.

Order ACCIPITRES.

Fam. FALCONIDÆ.

191. *PANDION HALIAËTUS* (L.).

(19.) Occasionally killed near Shanghai, but scarce.

192. *CIRCUS ÆRUGINOSUS* (L.).

(44.) Obtained at Kiukiang, 30th November. Scarce.

193. *CIRCUS SPILONOTUS*, Kaup.

(43.) Found in the district all winter, but is much more plentiful when migrating in spring and autumn. Frequents the marshes, feeding on frogs and small snakes.

194. *CIRCUS MELANOLEUCUS* (Forster).

(42.) Arrives in April in large numbers, frequenting the low cultivated lands and marshes. When shot they are

usually gorged with frogs. As a rule, they pass straight on without staying; a marsh may be full of them one day; two days later none are to be seen, until new arrivals come in. The autumn migration I have not witnessed.

195. *CIRCUS CYANEUS* (L.).

(39.) Common throughout the winter until May.

196. *CIRCUS MACRURUS* (Gm.).

(40.) *Circus pallidus*, Sykes; Swinhoe, P. Z. S. 1871, p. 342.

A female was obtained on the Yangtse by Captain Blakiston. I have shot immature birds at Kiukiang in spring.

197. *CIRCUS PYGARGUS* (L.).

(41.) Said by David to occur in Central China; reported doubtfully from the Yangtse by Swinhoe.

198. *BUTEO PLUMIPES* (Hodgs.).

(26.) *Buteo asiaticus* (Lath.); Swinhoe, P. Z. S. 1871, p. 339.

Common in winter; most of those killed are young, very pale birds.

199. *BUTEO HEMILASIUS*, T. & S.

(27.) Common in winter; mostly pale immature birds.

200. *ARCHIBUTEO STROPHIATUS* (Hodgs.).

(38.) *Archibuteo aquilinus*, Hodgs.; Swinhoe, P. Z. S. 1871, p. 339.

Not uncommon in the winter, especially in the marshlands of the Yangtse.

201. *AQUILA CLANGA*, Pall.

(12.) Spotted Eagles are not uncommon on the Yangtse, both on the hills and among the reed-beds where wildfowl swarm all winter. I refer them to this species, but some may belong to the smaller race, *A. maculata*.

202. *AQUILA HELIACA*, Savigny.

(11.) *Aquila bifasciata*, J. E. Gray; Swinhoe, P. Z. S. 1871, p. 338.

Common at Foochow and frequently met with in the

central provinces by David; so there can be little doubt that some of the large Eagles seen on the high ranges of the Yangtse are of this species.

203. *NISAËTUS FASCIATUS* (Vieillot).

One in the Shanghai Museum was shot near Kahing in winter, and I obtained one myself in the same district. Further up the Yangtse I have seen birds which appeared to be of this species.

204. *HALIAËTUS ALBICILLA* (L.).

Common on the Yangtse in winter. They breed, I am told, on Bonham Island, and probably on other rocky islets off the coast.

205. *SPIZAËTUS NIPALENSIS*, Hodgs.

(14.) David mentions one obtained near Nankin by Père Heude.

206. *ASTUR CUCULOIDES* (Temmin.).

(35.) Found nesting in Kiangsi and Chekiang by David. I obtained a fine adult male in the Lushan Hills on 26th May.

207. *ASTUR SOLOENSIS* (Lath.).

(36.) Ranges from Pekin to South China, but I have never come across it.

208. *ACCIPITER NISUS* (L.).

(38.) Common all winter, its numbers being increased in spring and autumn. Few, if any, remain to breed.

209. *ACCIPITER VIRGATUS* (Temmin.).

(37.) I have one taken at Shanghai 28th May, and another at Kiukiang 10th October. In the Shanghai Museum are a pair which were taken at sea, between Shanghai and Nagasaki, on 6th May.

210. *BUTASTUR INDICUS* (Gm.).

(25.) Passes through on migration in March and April. A good number travel together, and remain a week or so among the hills on their way; they seem to avoid the plains.

211. *FALCO COMMUNIS* (Gm.).

(27.) *Falco peregrinus*, L.; Swinhoe, P. Z. S. 1871, p. 340.

A common resident species, breeding during March and April on the rocky cliffs of the river, among the mountains, and frequently in pagodas. A partial migration takes place in autumn. During the first week in November I found them very abundant on the rocky islands off the coast, notably on Gutzlaff Island and Shaweishan; on the latter there must have been hundreds. The attraction was the crowd of small migrants, which they had probably followed from the north.

212. *FALCO MELANOGENYS*, Gould.

The pair of this species—or race—mentioned by Mr. Seebohm (Ibis, 1884, p. 260) were nesting in a pagoda on the Hai San (Shoe Rock), also known as “Great Orphan,” in the Poyang Lake. Père Heude has a very fine male, also killed on the Yangtse.

213. *FALCO SUBBUTEO*, L.

(48.) Common between May and October.

214. *FALCO REGULUS*, Pall.

(49.) *Hypotriorchis æsalon* (L.); Swinhoe, P. Z. S. 1871, p. 340.

A common winter visitor.

215. *CERCHNEIS TINNUNCULUS* (L.).

(52.) *Tinnunculus alaudarius*, var. *japonicus*, Swinhoe, P. Z. S. 1871, p. 340.

Most plentiful during the autumn migration, when, from August to November, half a dozen may frequently be seen travelling together. A few remain all the winter, and perhaps a few breed in the district, as I have seen one as late as 6th June.

[Note.—*CERCHNEIS AMURENSIS* (Radde).

This species may pass through on migration, and perhaps some of the Kestrels seen in autumn belong to it or to

C. pekinensis, but I have never been able to obtain a specimen in the district.]

216. *MILVUS MELANOTIS*, T. & S.

(21.) Very abundant. I am inclined to think an annual migration takes place, and they certainly shift their quarters. At Shanghai few or none are to be seen in summer, but numbers arrive in September or October and remain all winter. In 1883 the first one I saw return was on October 11th; on the following day a party of twelve appeared, circled over the river for a few minutes, and then disappeared to the S.W. At Chefoo one year throughout August only one or two solitary Kites were about, but on the 29th a large number appeared on the cliffs and shore. At Kiukiang they remain throughout the year.

These birds have certain favourite roosting-places, where they collect for the night. Out of a group of fine old trees at Kiukiang I have put up fully thirty individuals. At Hankow one night, when passing in a sanpan over the flooded plain among the willows that border the river, I disturbed a score out of two or three adjacent trees, and a few nights later ten of them rose from the same place; the trees had nothing to distinguish them from hundreds of others growing around. These Kites also congregate on the ledges of the river-cliffs, which they share with Peregrines and Cormorants.

217. *HALIASTUR INDUS* (Bodd.).

Comes to breed in small numbers at Kiukiang. David found it plentiful in the south of the province. I have also seen it at Hankow.

Fam. *VULTURIDÆ*.

218. *VULTUR MONACHUS*, L.

(7.) One in the Shanghai Museum was killed on Sha-weishan, at the mouth of the Yangtse; another at Ningpo. It is said that during the Taiping rebellion, when thousands of dead bodies were lying about the fields, Vultures were plentiful in the Yangtse Valley, where now they seldom appear. There would be no food there for them now.

Order STEGANOPODES.

Fam. PELECANIDÆ.

219. PELECANUS PHILIPPENSIS (Briss.).

(769.) Common on the sand-banks of the river in winter. Where they breed I do not know ; but I have not observed them in summer, perhaps from lack of opportunity.

Fam. PHALACROCORACIDÆ.

220. PHALACROCORAX CARBO (L.).

(770.) Common on the river, wherever there are suitable cliffs or rocks, several hundreds often collecting together.

They assume the handsome breeding-plumage in March. On the 9th of that month, when travelling on a raft down the Chien San River towards the Yangtse, we passed under scores of them, all sitting in pairs on overhanging boughs (some of them very slender) only 15 or 20 feet overhead.

They are largely used for fishing purposes on the clear creeks which cross the delta country in all directions ; also on the streams issuing from the mountains and on the inland lakes. They are generally kept in flocks of from 30 to 100, and are taken about the country as required. Some flocks are steadily driven hundreds of miles down the river to reach a new fishing-ground.

Order HERODIONES.

Fam. ARDEIDÆ.

221. ARDEA CINEREA, L.

(626.) Very common. They breed early in March.

222. ARDEA PURPUREA, L.

(627.) I have only met with this species in the month of April, when it is not uncommon.

223. HERODIAS ALBA (L.).

(628.) *Egretta modesta*, Swinhoe, P. Z. S. 1871, p. 412.

A few remain on the river all winter. In April others arrive, and for about a month they are plentiful. They then become scarce, though a few may be seen on the wing, and an odd bird or two on the border of the lake, from which

I infer that they breed not far off. By the middle of July great numbers of young birds appear, fully grown, but with yellow bills and no dorsal plumes. On one half-flooded island I have seen hundreds. A bird shot on 21st April had a yellow bill and plumes only just developing. As noted by Mr. Oates (B. of Brit. Burm. ii. p. 247), individuals of very large size occur occasionally. The following measurements are taken from one shot at Kiukiang, 6th December:—

Length 46 inches; wing 18; bill to gape $6\frac{1}{2}$ (yellow); culmen $5\frac{1}{4}$; tarsus 9.

224. *HERODIAS INTERMEDIA*, Wagl.

(629.) “Hankow” (*Swinhoe*). A specimen in the Shanghai Museum dated April has plumes fully grown. Not a common bird, I fancy, but no doubt often mistaken in the field for the following species.

225. *HERODIAS GARZETTA* (L.).

(630.) A common bird, some remaining throughout the winter. I have seen them even when deep snow was on the ground, when they were almost invisible. Being clothed in white myself, the birds could make nothing of me, and refused to do more than just move out of my way.

226. *BUBULCUS COROMANDUS* (Bodd.).

(632.) Arrives in April in fine russet plumage, but is most plentiful on autumn migration in September and October.

227. *ARDEOLA PRASINOSCELES*, Swinhoe.

(635.) Breeds plentifully in the district. Most of them leave by October, but I met with two near Kahing on Christmas Day, and one on the following day.

228. *ARDETTA FLAVICOLLIS* (Lath.).

(639.) Very common in summer, nesting in June and July in the copses on low hills among the lakes and paddy-fields.

229. *ARDETTA SINENSIS* (Gm.).

(642.) Abundant between April and the end of September.

230. ARDETTA CINNAMOMEA (Gm.).

(640.) Met with in spring, and common in autumn. No doubt they breed in the district.

231. ARDETTA EURYTHMA, Swinhoe.

(641.) Not common, but appears in May, and perhaps breeds in the Yangtse Valley.

232. BUTORIDES JAVANICUS (Horsf.).

(633.) Appears in May, and again in August and September, but I am doubtful about its breeding.

233. NYCTICORAX GRISEUS (L.).

(636.) *Nyctiardea nycticorax*, Swinhoe, P. Z. S. 1871, p. 413.

A common species and resident, but in March and April a good many travelling parties may be seen.

234. BOTAURUS STELLARIS (L.).

(638.) A common winter bird in the marshes and reed-beds, remaining till the middle of April.

Fam. CICONIIDÆ.

235. CICONIA NIGRA (L.).

(645.) Found all along the Yangtse in winter among the reed districts. More often than not they are seen singly, sometimes two or three together; they also mingle with the flocks of Common Herons.

236. LEPTOPTILUS JAVANICUS (Horsf.).

(643.) Found in July in Kiangsi province by David, but whether in the extreme south or in the Yangtse Valley I know not.

237. TANTALUS LEUCOCEPHALUS, Gm.

(647.) In the Shanghai Museum is one labelled "Changchow," between Shanghai and the Yangtse. I believe I have seen it on the river in winter, but too far off to recognize for certain.

Fam. PLATALEIDÆ.

238. IBIS NIPPON, Temm.

(649, 650.) Uncommon, but found on the river in

winter, and no doubt breeds, for it nests at Ningpo. It is evidently a local rather than a scarce bird.

239. *PLATALEA MAJOR*, T. & S.

(646.) Met with at Kiukiang on migration in October and April, Shanghai in November. A few probably remain through the winter.

240. *PLATALEA MINOR*, T. & S.

A specimen in the Shanghai Museum was killed in November.

Order ANSERES.

Fam. ANATIDÆ.

241. *CYGNUS MUSICUS*, Bechst.

(707.) "Shanghai market in winter" (*Swinhoe*).
There is a specimen in the Museum.

242. *CYGNUS MINOR*, Pall.

(708.) All the Swans which I have examined in the flesh are of this species. Large flocks frequent the low islands and mud-flats at the mouth of the Yangtse. On the upper reaches of the river they are not so plentiful, but may be seen from time to time passing overhead. At the head of the Poyang Lake I have seen a flock of at least a thousand, among myriads of other wildfowl.

243. *ANSER ALBIFRONS* (Gm.).

(704.) Not common.

244. *ANSER ERYTHROPUS* (L.).

(705.) This is the most numerous species on the upper reaches of the river at least, and is the most easily approached and shot. On sand-banks and mud-flats it is quite useless attempting to stalk them or any other Geese; but when feeding on stubbles and ploughs they will occasionally allow one to walk right up to them, though the country is flat and open, without a vestige of cover. I have also, in a sanpan, circled round a flock sitting on the water until near enough to get a shot.

These Geese arrive here early in October, and some remain

until the middle of April, but the northward movement begins early in March.

245. *ANSER CINEREUS*, Meyer & Wolff.

(703.) This is by no means one of the common Geese with us. A good many are killed on Bush Island at the mouth of the Yangtse, and I have seen specimens from Chinkiang; but on the upper reaches I have not identified it for certain.

The beak, legs, and feet are pale pink.

246. *ANSER SEGETUM* (Gm.).

(702.) *Anser segetum*, var. *serrirostris*, Swinhoe, P. Z. S. 1871, p. 417.

The commonest Goose at the mouth of the Yangtse, and (except *A. erythropus*) on the upper reaches too. The size and shape of the beak vary much, and I do not think species can be founded on it.

247. *ANSER CYGNOIDES* (L.).

(706.) Found at the mouth of the Yangtse, but not common.

(NOTE.—I am under the impression that a Snow Goose—probably *A. hyperboreus*, Pall.—visits the mouth of the Yangtse, but I have been unable to obtain a specimen.)

248. *NETTAPUS COROMANDELIANUS* (Gm.).

(718.) Appears in considerable numbers in May; early in June the young are flying about. They then frequent the roofs of houses in the settlement, and particularly the chimneys, where the parents and a brood of young may often be seen together. They are said to nest in the chimneys; they also nest in hollow trees, and I have some young in down taken on 10th August, which must have been a second brood. When not resting on the housetops, they may be found among the rushes on the lakes.

249. *DENDROCYGNA JAVANICA* (Horsf.).

The only specimen I have met with was obtained in summer in Soochow, and is now in the Shanghai Museum (Ibis, 1889, p. 446).

250. *TADORNA VULPANSER*, Flem.

(712.) *T. cornuta* (Gm.), Swinhoe, P. Z. S. 1871, p. 418.

A coast bird, found near Shanghai in winter, but not met with higher up the Yangtse.

251. *CASARCA RUTILA* (L.).

(713.) An inland bird, common in winter on the river and adjacent waters. Almost always found in pairs, though a dozen or more pairs may be together.

252. *AIX GALERICULATA* (L.).

(719.) A local bird. Fairly common round Kahing. Scarce at Kiukiang, where I have only obtained a single specimen.

253. *MARECA PENELOPE* (L.).

(715.) Abundant.

254. *DAFILA ACUTA* (L.).

(714.) Abundant.

255. *ANAS BOSCHAS*, L.

(710.) Abundant. Appears at the end of September, and remains till early in April.

256. *ANAS ZONORHYNCHA*, Swinhoe.

(711.) Our only resident Duck. I have taken eggs in May, and also in July, probably a second brood. The breeding-plumage is more rufous than winter dress, especially on the crown of the head.

257. *CHAULELASMUS STREPERUS* (L.).

(716.) Not common.

258. *QUERQUEDULA CRECCA* (L.).

(721.) Very abundant. The earliest arrival noted is 12th September, and some flocks still remain in the first week in May.

259. *QUERQUEDULA CIRCIA* (L.).

(720.) This is evidently a more southern bird. In winter I have never seen it, but in April it is rather abundant, mingling with flocks of Common Teal.

260. *EUNETTA FORMOSA* (Georgi).

(722.) Abundant in winter. Generally found in vast flocks in wild open marshes and lakes, and not, like the Common Teal, on ponds, creeks, and paddy-fields. Comparatively few, therefore, are shot.

261. *EUNETTA FALCATA* (Pall.).

(723.) One of the commonest species on the Yangtse, but not found much in the delta round Shanghai. Higher up large flocks collect on the river, and are amongst the last wildfowl to leave in the spring.

262. *SPATULA CLYPEATA* (L.).

(717.) Found sparingly in winter.

263. *FULIGULA CRISTATA* (L.).

(731.) Found sparingly in winter.

264. *FULIGULA BAERI*, Radde.

(732.) I cannot understand why this species should have been looked upon as a hybrid. It is scarce and irregular in its appearance, but when met with seems to be numerous, and all the specimens I have noted are similar in plumage. I have seen a native hawker with fully twenty specimens, but unfortunately all but one were too stale to skin; it is evident that so many hybrid Ducks could never have been met with at once.

265. *FULIGULA FERINA* (L.).

(727.) Found sparingly in winter.

266. *FULIGULA MARILA*.

(729.) Found sparingly in winter.

267. *FULIGULA MARILOIDES* (Richardson).

(730.) Shanghai market in winter (*D. & O.*).

268. *CLANGULA GLAUCION* (L.).

(725.) *Bucephala clangula*, Swinhoe, P. Z. S. 1871, p. 418. Shanghai in winter.

269. *CEDEMIA FUSCA* (L.).

(724.) Shanghai in winter. I have seen a large flock, which seemed to consist of this species, near Nankin.

270. *ÆDESMIA VELVETINA*, Cassin.*Æ. americana*, Swinhoe, P. Z. S. 1871, p. 419.

"Shot on the Yangtse by Blakiston."

The American form of *Æ. fusca*.271. *MERGUS MERGANSER*, L.(734.) *M. castor*, Swinhoe, P. Z. S. 1871, p. 416.

Very abundant. In the thick water of the Yangtse they dive under to hunt for food; but in clear mountain streams they paddle on the surface with only the beak and eyes immersed, and then when they see their prey down they go. I have taken a fish exactly a foot in length from the gullet of one.

272. *MERGUS SERRATOR*, L.

(736.) A coast-bird, rare at Shanghai, and not found inland.

273. *MERGUS ALBELLUS* (L.).

(733.) Common, especially in March, when they arrive from the south.

Order COLUMBÆ.

Fam. COLUMBIDÆ.

274. *TURTUR RUPICOLA* (Pall.).

(558.) A hill species frequenting fir-woods to a considerable elevation; in winter often gregarious. From its large size, bluish appearance on the wing, deep note, and wild nature it much resembles a Pigeon. Although essentially a hill-bird, it is not rare on the plains, and in our garden at Kiukiang they breed annually, and remain throughout the year. One year the nest was in a pomegranate-tree overhanging a path along which people passed all day, and so low that it could almost be reached by the hand. Two young birds were safely reared and flew the first week in June. This year it was in a plum-tree about ten feet from the ground.

275. *TURTUR CHINENSIS* (Scop.).

(559.) A thoroughly familiar bird, frequenting villages, gardens, and copses. Sometimes found at a considerable

elevation, but only in sheltered corners close to human habitations.

276. *TURTUR HUMILIS*, Temm.

(361.) A summer visitant, breeding plentifully in the Yangtse Valley, and remaining till the middle of October.

Order GALLINÆ.

Fam. PHASIANIDÆ.

277. *PUCRASIA DARWINI*, Swinhoe.

(589.) Found in the Chekiang hills, and I have seen a specimen from the hills behind Ngankin, in Anhwei.

278. *PHASIANUS TORQUATUS* (Gm.).

(590.) Our Pheasants vary a good deal in size and brilliancy of plumage. The finest, as a rule, come from the hilly district bordering the river; they frequently have the white ring complete, or nearly so, as in birds from the north: the delta birds are rarely so fine, and nearly always have the white ring interrupted in front. The food on the hills is perhaps more varied and nourishing, though it cannot be so abundant as on the plains, where beans, rice, and other grains are unlimited.

279. *PHASIANUS REEVESI* (Gray).

(595.) Though common from Ichang westwards, this bird is only found at one or two places on the Lower Yangtse. The birds offered for sale at Hankow all come from the west; but at Kiukiang I have bought some alive, which I have every reason to believe came from the hill-ranges about twenty miles north of the river. On the Wan Shan range behind Ngankin they are found, and all the natives knew them well; but during four days' hard work I met with nothing but a cast tail-feather.

Fam. TETRAONIDÆ.

280. *BAMBUSICOLA THORACICA* (Temm.).

(569.) Fairly plentiful in the Kahing district, especially towards the south, where the Chekiang hills extend into the plains. Found on many parts of the Yangtse, but seldom abundantly. The coveys sometimes number as many as

fifteen. They frequent thick bamboo-cover at the bases of hills by preference, but are also found up to an elevation of 2000 feet. They lie very close and are difficult to flush; when beaten up they rise rapidly and scatter in all directions, flying low. They roost in trees or bamboos, and when flushed will sometimes perch in them. The call-note of the male in spring is a loud piercing challenge, which the natives take advantage of to catch them. A countryman once showed me how it was done. He had two birds in separate cages, one of which he hid under a pile of brushwood. The other was released, and his challenge being answered by the hidden bird, the latter was soon discovered, and a fight ensued through the bars of the cage. I have myself attracted them by imitating the call.

281. *COTURNIX COMMUNIS*, Bonn.

(573.) Common all winter and up to the middle of May; they may be shot again early in September, and it is almost certain a few breed in the district. At Kiukiang in summer I see a few Quails, but I have shot none, and cannot say for certain whether they are Hemipodes or true Quails.

Fam. TURNICIDÆ.

282. *TURNIX BLANFORDI*, Blyth.

(576.) *Hemipodius viciarius*, Swinhoe, P. Z. S. 1871, p. 402.

Arrives at the beginning of May and remains till the middle of October. They are difficult birds to flush, and therefore seem much scarcer than they really are.

Order GERANOMORPHÆ.

Fam. RALLIDÆ.

283. *RALLUS INDICUS*, Blyth.

(699.) A few may be found in winter among the reed-beds of the river. In spring and autumn it is more common, and some of them doubtless breed.

284. *RALLUS JOUYI*, Stejneger.

(698.) *Hypotaenidia striata* (L.); Swinhoe, P. Z. S. 1871, p. 415.

Two specimens of a Rail obtained at Shanghai in May and July are described as new under the above name by Dr. Stejneger (Proc. U. S. Nat. Mus. 1886, p. 362).

A specimen in the Shanghai Museum, shot in May, and another from Chinkiang in a private collection, probably are of this species, but I have been unable to compare them.

285. *PORZANA ERYTHROTHORAX*, T. & S.

(695.) A specimen in the Shanghai Museum was obtained in the neighbourhood.

286. *PORZANA EXQUISITA*, Swinhoe.

Arrives in March and April, when I have found it on several of the snipe-marshes in the Shanghai district. It seems to be one of our earliest migrants to put in an appearance, the first noted being on 7th March.

287. *PORZANA PYGMÆA* (Naumann).

(696.) Very abundant on the snipe-marshes in April and May, and again in autumn until the end of November. There can be little doubt that some remain to breed.

288. *GALLINULA PHÆNICURA* (Penn.).

(694.) Arrives at the beginning of April, and breeds abundantly, remaining until October.

289. *GALLINULA CHLOROPUS* (L.).

(693.) Not nearly so common as the last named, but comes to breed in summer.

290. *GALLINULA COCCINEIPES*, Slater, Ibis, 1891, p. 44.

A specimen killed near Shanghai is in the Shanghai Museum, and is the "Crake, sp. incert." of my List of Birds, Shanghai Museum, Journ. C. B. As. Soc. 1883, p. 16.

291. *GALLICREX CINEREUS* (Lath.).

(692.) Arrives in April in large numbers, and remains till November.

292. *FULICA ATRA*, L.

(700.) A few breed in the district, and in winter thousands may be seen on the shallow lakes bordering the Yangtse.

Fam. GRUIDÆ.

293. *GRUS CINEREA*, Bechst.

(620.) Found in winter, but seems to be uncommon.

294. *GRUS VIPIO*.

(622.) A handsome specimen was shot near Shanghai in January 1889. It stood about 4 feet high; wing 23 inches, tarsus 11, bill $5\frac{1}{2}$.

295. *GRUS VIRIDIROSTRIS*, Vieill.

(623.) Found on some of the wildest marsh-lands of the Yangtse and Poyang Lake in winter.

296. *GRUS LEUCOGERANUS*, Pall.

(624.) White Cranes of small size, which I take to be of this species, are common on the Yangtse in winter. In January 1889 I saw a number a few miles from Shanghai, but owing to four misfires was unable to obtain one after a long stalk.

297. *GRUS MONACHUS*, Temm.

(621.) The commonest Crane on the Yangtse. Found all along the river in winter.

Fam. OTIDÆ.

298. *OTIS DYBOWSKII*.

(603.) *Otis tarda*, L.; Swinhoe, P. Z. S. 1871, p. 402.
Common all along the Yangtse in winter.

Order LIMICOLÆ.

Fam. PARRIDÆ.

299. *HYDROPHASIANUS CHIRURGUS* (Scop.).

(690.) Large flocks arrive early in June; they are then in winter plumage, but begin to moult immediately, and as soon as this is completed breed. I have shot one in full moult as late as 6th July, and yet I have taken hard-set eggs at the end of June, and it seems they must commence nesting whilst still in moult. They build floating nests among the sprays of water-calthrop and lotus beds: the number of eggs is usually four.

Fam. GLAREOLIDÆ.

300. GLAREOLA ORIENTALIS, Leach.

(617.) Very large flocks pass through in April and May, and return again in August and September. A few stray birds may be met with in winter.

Fam. CHARADRIIDÆ.

301. CHARADRIUS FULVUS, Gm.

(608.) Passes through in April and May; the autumn migration I have not noticed.

302. CHARADRIUS HELVETICUS.

(607.) Scarce. I have met with it at Shanghai in February and May in winter plumage.

303. CHARADRIUS MINOR, Wolf & Meyer.

(614.) *Ægialitis dubius* (Scop.); Swinhoe, P. Z. S. 1871, p. 404.

Common during migration in March, April, and May, and again in September and October.

304. CHARADRIUS PLACIDUS (Gray).

(612.) *Ægialitis hartingi*, Swinhoe, P. Z. S. 1871, p. 404.
Arrives from the north in September, and remains throughout the winter. Not uncommon on the muddy banks of creeks and shallow lakes.

305. CHARADRIUS GEOFFROYI, Wagl.

(610.) Met with in Shanghai market in May.

306. CHARADRIUS VEREDUS, Gould.

(609.) Passes through in March and April.

307. CHARADRIUS MONGOLICUS, Pall.

(611.) "China coast in winter" (*Swinhoe*).

"Shanghai market in spring" (*D. & O.*).

308. CHARADRIUS CANTIANUS, Latham.

(615.) "China coast in winter" (*Swinhoe*).

309. LOBIVANELLUS CINEREUS, Blyth.

(605.) Flocks begin to arrive in February, frequenting

the wet ploughs and marsh lands. They mostly leave before the end of April, but a few remain to breed.

On 26th May I saw a pair on a small island in a lake at Kiukiang, and in June one was shot and given to me.

310. *VANELLUS CRISTATUS*, Wolf & Meyer.

(604.) Common all winter.

311. *STREPSILAS INTERPRES* (L.).

(619.) Met with in Shanghai market in May.

312. *HÆMATOPUS OSCULANS*, Swinhoe.

(618.) A winter species, not very abundant.

Fam. SCOLOPACIDÆ.

313. *RECURVIROSTRA AVOCETTA*, L.

(660.) Found in small parties in winter.

314. *HIMANTOPUS MELANOPTERUS*, Temm.

(661.) *H. candidus*, Bonn.; Swinhoe, P. Z. S. 1871, p. 405.

Occasionally shot near Shanghai, but rare. Specimens in the Museum are dated April and May.

315. *SCOLOPAX RUSTICULA*, L.

(681.) Woodcocks arrive about the end of October and early in November, and are scattered thinly over the country all winter. I have heard of one among the hills in September, and have frequently seen them there in April, from which I think it probable that a few remain to breed. They occasionally perch on trees. I have driven one out of a holly and on another occasion two out of a bamboo.

316. *GALLINAGO SOLITARIA* (Hodgs.).

(682.) Very scarce. I have only seen one in the flesh, killed on 28th October in the district. In the north and in Corea it is more plentiful, and its scarcity on the Yangtse is probably accounted for by its being a mountain species (*cf.* D. & O., "Ois. de la Chine," p. 476).

Found by Swinhoe in Shanghai market in February.

317. *GALLINAGO STENURA* (Bp.).

(684.) *G. horsfieldi* (Gray); Swinhoe, P. Z. S. 1871, p. 407.

The Pin-tailed Snipes begin to arrive about the middle of

April—a few may come earlier—and for about a month they swarm on the marshes, and among the bean- and barley-crops. I shot one at Shanghai on February 2nd, but, though in good condition, it must have been unable to travel for some reason. In the autumn they begin to return about the middle of August, and I have shot them as late as 30th September; their numbers are very uncertain, and usually less than in the spring.

318. *GALLINAGO MEGALA*, Swinhoe.

(683.) These large Snipes, which, when in fine condition, sometimes weigh 8 oz., begin to arrive during the first week in April, but are seldom plentiful till the end of the month. In 1888 I shot several on the 29th and 30th March, and one was killed at Kiukiang on 21st March, but these were exceptional dates. In the autumn a few birds either of this or the preceding species are in the market during the last few days of July. When plentiful they are found almost anywhere, but on the whole rather prefer dry grassy slopes and fields to wet ground.

319. *GALLINAGO CÆLESTIS*, Frenzel.

(685.) *G. scolopacina*, Bp.; Swinhoe, P.Z.S. 1871, p. 407. Scattered through the district all winter, its numbers being largely increased in spring and autumn.

320. *RHYNCHÆA CAPENSIS*, L.

(687.) Not common, but found occasionally in spring and autumn. In Shanghai I have noted it in February and April. At Kiukiang a male was shot off the nest on 20th May, and brought to me along with the eggs, of which there were four. Also met with at Kiukiang in September and October.

321. *TRINGA CANUTUS*, L.

(672.) Shanghai market in spring: specimens obtained in May in full breeding-plumage.

322. *TRINGA CRASSIROSTRIS*, Temm. & Schleg.

(671.) Shanghai market in spring: May specimens have only partially assumed breeding-plumage.

323. *TRINGA SUBARQUATA*, L.

(677.) Shanghai market in spring: one in the Museum dated 8th May is in beautiful breeding-plumage.

324. *TRINGA CINCLUS*, L.

(675.) To be found in small numbers all the winter. On migration they pass in April and May, and again in October and November.

325. *TRINGA SUBMINUTA*, Midd.

T. damacensis, Swinhoe, P. Z. S. 1871, p. 409.
Shanghai market in May.

326. *TRINGA PLATYRHYNCHA*, Temm.

(674.) "Shanghai market in April and May" (*D. & O.*).

327. *TRINGA ACUMINATA* (Horsf.).

(673.) Passes through Shanghai in fair numbers in April and May.

328. *TRINGA TEMMINCKI*, Leisl.

(678.) Kiukiang, 22nd October.

329. *TRINGA RUFICOLLIS*, Pall.

(676.) *T. salina*, Swinhoe, P. Z. S. 1871, p. 409.
Passes in May and again in September.

330. *CALIDRIS ARENARIA* (L.).

(670.) "General in winter" (*Swinhoe*, P. Z. S. 1871, p. 408).

I have not met with it.

331. *TRINGOIDES HYPOLEUCUS* (L.).

(669.) A common resident on our lakes and streams.

332. *EURYNORHYNCHUS PYGMÆUS* (L.).

(679.) Occasionally found in the Shanghai market in spring.

333. *TOTANUS OCHROPUS* (L.).

(667.) Common all winter. Usually found singly or in pairs, but during the autumn migration I have seen as many as a dozen together.

334. *TOTANUS GLAREOLA* (L.).

(666.) A common spring and autumn migrant, very rarely found in winter. I was surprised one day to see one alight on a pond in deep water, swim to the shallows, and quietly begin to feed.

335. *TOTANUS CALIDRIS* (L.).

(665.) A spring and autumn migrant, not very common.

336. *TOTANUS FUSCUS* (L.).

(664.) More plentiful than the last, a few remaining all winter. In May I have obtained them in full breeding-plumage. On 31st March, out of a dozen birds, several were in nearly full plumage, others in winter dress, and others intermediate.

337. *TOTANUS GLOTTIS*, L.

(662.) Common in winter until the end of April; reappears in October.

338. *TOTANUS INCANUS*, Vieill.

(668.) Killed in summer plumage in May near Shanghai by Père David. A specimen in the Museum is dated April.

339. *TEREKIA CINEREA* (Gm.).

(659.) Shanghai market in May; scarce.

340. *LIMOSA UROPYGIALIS*, Gould.

(657.) Shanghai market in spring.

341. *LIMOSA MELANUROIDES*, Gould.

(658.) *L. brevipes*, G. R. Gray; Swinhoe, P. Z. S. 1871, p. 406.

Shanghai market in spring.

342. *EREUNETES TACZANOWSKII* (Verr.).

(680.) *Pseudoscolopax semipalmatus*, Jerd.; Swinhoe, P. Z. S. 1871, p. 407.

Passes through Shanghai in March and April. Two shot on 28th March were in winter plumage; the stomachs contained shells, crabs, and young shoots of the reeds which were just beginning to show above the mud of the river-banks. One killed on 11th April was in nearly full breeding-plumage. Obtained in Hankow by Swinhoe.

343. NUMENIUS VARIEGATUS.

(653.) *N. phæopus* (L.); Swinhoe, P. Z. S. 1871, p. 410.
Passes Shanghai in May and September.

344. NUMENIUS MINUTUS, Gould.

(656.) Passes Shanghai in April. I shot a single one at Kiukiang 30th September.

345. NUMENIUS LINEATUS, Cuv.

(654.) May be found all up the Yangtse in winter, but is more plentiful during the spring and autumn migrations.

Order GAVIÆ.

Fam. LARIDÆ.

346. LARUS CACHINNANS, Pall.

(750.) *L. cachinnans*, Pall.; Swinhoe, P. Z. S. 1871, p. 421.

(751.) *L. occidentalis*, Aud.; Swinhoe, P. Z. S. 1871, p. 421.

Common on the Yangtse in winter, inland as well as near the coast.

347. LARUS MELANURUS, T. & S.

(749.) *L. crassirostris*, Vieill.; Swinhoe, P. Z. S. 1871, p. 421.

Common in winter on the coast. Père David met with it on the Poyang Lake and on other inland waters.

348. LARUS CANUS, L.

(747.) Common in winter. The colours of the soft parts are much brighter than in most English specimens. Iris very pale straw; bill, legs, and feet bright orange-yellow; skin round the eye, rictus, and inside of mouth bright scarlet-orange.

349. LARUS RIDIBUNDUS, L.

(752.) Very common throughout the Yangtse from November till April. As late as 9th April they had not assumed the dark head.

350. LARUS SAUNDERSI (Swinhoe).

(754.) I cannot agree with David that this species "is perhaps the commonest of all the Gulls which frequent the

fresh waters of the interior." That it must pass through the Yangtse basin on its way north is certain, but I believe none winter so far north, and though I have kept a careful look out, and have several times shot doubtful-looking *L. ridibundus* in mistake for it, not a single specimen has come under my notice.

351. SYLOCHELIDON CASPIA (Pall.).

(755.) Large flights passed through Kiukiang in September, October, and November one year, but, as in the case of most Terns, their visits are irregular.

352. HYDROCHELIDON HYBRIDA (Pall.).

(757.) Abundant at Kiukiang one year in July and August.

353. HYDROCHELIDON LEUCOPTERA (Schinz).

(758.) Passes Kiukiang every May, sometimes in very large flights.

354. STERNA SINENSIS (Gm.).

(762.) Passes through Kiukiang and Shanghai every April and May, returning again in July and August with young birds.

355. STERNA FLUVIATILIS.

(759.) *S. hirundo*, L.; Swinhoe, P. Z. S. 1871, p. 422.

Passes and returns at the same dates as the last two, but is less abundant.

Order PYGOPODES.

Fam. COLYMBIDÆ.

356. COLYMBUS SEPTENTRIONALIS, L.

(737.) I have seen two shot at Shanghai in February, and a third is in the Museum.

Fam. PODICIPIDÆ.

357. PODICEPS CRISTATUS (L.).

(741.) Found on the river in winter, but scarce.

358. *PODICEPS MINOR* (Briss.).

(738.) *P. philippensis* (Bonn.), Swinhoe, P. Z. S. 1871, p. 415.

A very common resident; breeds at the end of June.

359. *PODICEPS AURITUS* (L.).

(739.) Not uncommon in winter.

XLII.—*Ornithological Notes*. By FRANK E. BEDDARD, M.A.,
Prosector to the Zoological Society of London.

I. *On the Tongue of Zosterops*.

THE tongue of *Zosterops* has been figured by Dr. Gadow and described in the following words* :—"The simplest form [in the *Tenuirostres*] is represented by *Zosterops*. The tongue ends in two short filaments, whilst the greater portion of the tongue proper is not divided; dorsal and ventral aspect smooth, hinder portion of horny sheath projecting backwards with a few (about 3-4) horny spines."

Dr. Gadow has mentioned the species to which his observations refer as being *Zosterops lateralis*. I find some little differences in the tongues of *Zosterops simplex* (of which a specimen has lately died in the Zoological Society's Gardens) and of two individuals of a species which I found among the Prosector's stores labelled "*Zosterops* from Japan." In the tongue of *Zosterops simplex* the upper surface is not perfectly smooth and flat, but the lateral margins are bent upwards and slightly folded inwards. As shown in the woodcut (fig. 1, p. 511), the upper surface of the tongue is thus converted into a deepish trough, which extends backwards on to the hinder wider section of the tongue for about half its extent. The posterior margin of the tongue is merely concave, not deeply notched, as in *Zosterops lateralis*; instead of being

* "On the Suctorial Apparatus of the *Tenuirostres*," P. Z. S. 1883, p. 62 *et seq.* pl. xvi. fig. 2. Dr. Bowdler Sharpe ('A Review of Recent Attempts to Classify Birds,' Budapest, 1891, p. 86, footnote) says that "the tongue of *Zosterops* . . . has no similarity to the 'brush' tongue of the Honey-sucker," but does not mention the species to which his observations refer.

Styan, F W. 1891. "On the Birds of the Lower Yangtse Basin, Part II." *Ibis* 3(12), 481–510.

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